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PERSONAL PREPAREDNESS FOR DISEASE PREVENTION

By DONALD B. ARMSTRONG, M.D., M.A., M.S.

Director, Department of Social Welfare, New York Association for Improving the Condition of the Poor.

The Personal Health Problem.

PERSONAL hygiene is the keynote of modern health work. In many communities the public health agents are doing all they can to prevent disease. They have provided a good and safe milk and water supply and thus greatly lowered the milk and water borne diseases such as typhoid and diarrhoea. The individual citizen could not have protected himself in these ways. However, there is still lots of typhoid—our death rate still does not approach the ideal death rate. Public hygiene is but one step in the right direction. Personal hygiene is the next step. It has a double aspect for it is positive and negative; it is creative and suppressive. For a long time we have realized the importance of the health creative aspects of personal hygiene, such as exercise, proper physical activities, sleep, rest, etc. Only recently, however, have we come to the point of realization of the importance of the disease preventive planks in the personal health program.

"Wash and be Clean"—and Healthy.

There are, of course, a great many things of varying importance in the disease suppression aspect of personal hygiene. The following are of primary value:

1. *Wash your hands before you eat.* Our hands have the greatest possible opportunities for contamination and infection. This is true in the factory, the home the school or the street, and consequently proper cleansing before one employs these human utensils as table instruments, is a simple, protective measure. In addition, if we are to avoid in our homes, restaurants, hospitals or food stores, a succession of "Typhoid Mary" catastrophes, we must insist on careful handwashing by all employees after leaving toilets and before handling food for others. This means hot water, preferably soap from a holder and individual towels.

2. *Insist on your own towel.* Numerous investigators have isolated with ease, from towels used by a large number of apparently healthful people, germs which must have come from the large intestine, notably the colon bacillus. This, in itself, is a harmless "bug" but one noted for the bad company it keeps, being frequently found with the typhoid bacillus. In any event, if the colon bacillus is on the common towel, the typhoid germ and other infectious parasites from the human intestinal tract may be there also. Consequently the person who uses a common towel next after a typhoid carrier may be the next person to come down with typhoid fever.

3. *Insist on your own cup. Insist on it* in the home, the church, the school and

the office and everywhere else. Several years ago an ordinary drinking glass was exposed to use in a Pennsylvania high school for several days without being washed. The cup was then taken to the laboratory, the accumulation of saliva and mucous about the edge of the glass carefully washed off with a sterile swab and the material injected into six guinea pigs. A short time later four of the guinea pigs died of tuberculosis; the moral is, *insist* on your own cup.

4. *"Sneezes spread diseases."* Unhygienic and irresponsible as it is for anyone to expectorate where the material may dry and be blown about as dust over foods and in people's faces, there is probably even greater danger in the careless cough or sneeze. We now believe that most diseases are transmitted directly from one person to another by personal contact. That is exactly what we have in the "subway sneeze." Hence, coughs fill coffins and there may be a disease in every sneeze.

Food Protection and Selection.

Another factor of great importance in this connection is the food problem. It is important that our foods be properly protected in the store and in the home from contamination by dust, flies and unnecessary handling. We can thereby reduce the infectious diseases carried by food. It is of much greater importance that we understand the proper selection of foods in our diet, for over-eating, under-eating and bad food combinations, if persisted in, undoubtedly bear a close relationship to the increasing sickness and death rates from the non-infectious so-called "constitutional diseases" such as Bright's disease, hardening of the arteries, etc. The anti-alcohol propaganda, the emphasis which is now being placed on the care of the teeth, the provision which communities are or should be making for the correction and removal of adenoids and tonsils and other physical defects of school children—all these things indicate still other significant fields for personal health endeavor.

A Personal Responsibility.

These are things which will save many lives and prevent a great deal of sickness. They are practical things which we all can teach and do. Here we don't have to wait for the discovery of a cancer cure or for the perfection of a successful method of treating diabetes. Neither do we have to ask for an increased expenditure by our health departments, out of our municipal budgets, for disease preventive work. It doesn't cost the city any money nor the health authorities any effort for the average citizen to "screen his sneeze" and to wash his hands before he eats. It is simply a matter of individual action and personal responsibility, without which we as a nation will be unable to take the next great step in health reform.

THE PRACTICING PHYSICIAN; HIS RELATION TO PUBLIC HEALTH ADMINISTRATION*

By JOHN W. TRASK

Assistant Surgeon General United States Public Health Service

THE purpose of this paper is to bring to the attention of practicing physicians their relation to the work of local, state, and national health departments. It will be explained how it is impossible for the health department of a city, county, or state to perform the work for which it has been organized unless it has the co-operation of the practicing physician. It will be shown that even the health work of the National Government depends upon the assistance of the physician.

A principal function of the federal health department is the control of epidemics and the prevention of the spread of disease from one State to another. It is impossible for the National Government to prevent the spread of disease from State to State unless it knows in which States, and where in these States, the diseases it wishes to control are prevalent. It can not prevent the spread of these diseases without knowing where they are present. It must get this information from the several State health departments.

In turn the State health departments can not furnish to the National Government information of the prevalence of disease within their respective jurisdiction, nor can they control the spread of disease within their respective jurisdictions, nor know what diseases are present and where they are present. Now, the State health department can secure this information of the prevalence of diseases only from the practicing physician, either by requiring the occurrence of cases to be directly reported to it or by requiring such reports to be made to the local health departments of cities and counties and the local officials to furnish the information to the State.

Nor can the local health departments, city, county, or township, prevent the occurrence of disease or control communicable diseases in their respective jurisdictions without a knowledge of what diseases are present and where and under what conditions they are occurring. This information they can obtain only from the practicing physicians by requiring reports of the occurrence of cases of the diseases to be controlled.

Thus it will be seen that national control of disease, State control of disease, and municipal and county control of disease all depend upon the co-operation of the practicing physician. Public health administration for the city, the county, the State, and the country as a whole depends for its success upon the information as to the prevalence of disease obtained from physicians' reports of cases.

Our standard of living as a people is improving. Greater and greater consideration is being given to the conditions under which we live and work. We have come to realize that in any community the health and welfare of each individual and of each household depend in a large measure on the conditions of health and welfare of every other individual and of every other household.

In the complex life of modern civilization we can not individually protect ourselves from disease. The danger of infection from the sick and diseased whom we do not see and of whose existence we may be unaware may be greater than the danger from the sick among those immediately about us. We can protect ourselves from infection from the sick of whom we know, but we are in large measure helpless to protect ourselves from the disease of the sick of whose existence we are in ignorance. Every case of a communicable disease in a community is directly or indirectly a menace to every individual. The welfare of each depends upon the health of the community.

For a century or more there has been growing, at first slowly and in the last

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decade or two by leaps and bounds, an interest in social betterment. It is in a way a result of this movement that the part played by disease in determining the happiness, welfare, and efficiency of a community has been recognized. It has come to be realized that a community in which typhoid fever or malaria or any other disease prevails is a sick community and that a sick community is deprived of happiness and of efficiency to the extent to which it is sick.

Coincident with this period of growing social interest there has been a most unusual advance in the world's knowledge in many lines. There has been a great increase in knowledge, especially of the causes of disease and their manner of spread. It has been definitely ascertained that a great many diseases, which for centuries have afflicted mankind, are preventable, and that while the statement of Pasteur that, "It is within the power of man to cause all infectious diseases to disappear from the earth" may be as yet only a theoretical ideal, it has been frequently demonstrated that it is entirely practicable to banish from a community certain diseases and to control and gradually reduce the number of cases of many other diseases. There are many diseases which the average community harbors merely because the inhabitants lack the initiative, energy, and desire to protect themselves from them.

The present movement for social betterment has manifested itself in a larger compensation for wage earners, in shorter hours for workingmen, in the protection of women and children from excessive hours of labor, in the improvement of housing conditions, in greater attention to recreation, in the education of the people in useful subjects, and in the prevention and control of disease.

The establishment of health departments has been a part of the general movement. The work of these departments is to control the controllable diseases, and they can properly have no other function. Many communities have attained the attitude of mind in which they are insisting that all diseases which it is possible to control shall be controlled. It is only a question of time and social progress when all communities will reach the same determination.

The work of health departments being the control of the controllable diseases, it is important to consider the things essential to this work. It is impossible for any health department, be its statutory powers and available appropriations never so great, to effectively control any disease without first having information as to whether the disease is present in the community, and, if present, how prevalent and where and under what conditions cases are occurring. The burning of punk in the streets, or the placing of mystic symbols over the doorway, or the mere appointment of a health officer, and the appropriation of money will not protect against disease. The control of disease is a work which requires definite information and knowledge of the occurrence of cases made use of by persons trained in epidemiology; that is, by persons having knowledge of the conditions which produce disease or cause its spread.

There are two main classes of controllable diseases at present recognized. These are communicable diseases and occupational diseases. The communicable diseases spread from individual to individual. Each case is a focus from which many persons may receive infection. Each focus is a potential epidemic. With but one or two exceptions every attempt at the control of communicable diseases other than by ascertaining the cases that occur, and the conditions under which they develop, has been a failure.

Occupational diseases are due to industrial environment and can be prevented only by ascertaining where conditions exist which are capable of producing them in workmen. Each case of an occupational disease shows where conditions of this kind exist, for the fact that a case has developed is conclusive evidence of the presence of conditions capable of producing the disease. To find where conditions exist which will produce these diseases it is, therefore, necessary to know of each case that occurs, and the time, place, and conditions under which it occurs.

For diseases due to improper living or housing conditions, an economic or social or educational readjustment is required. The degree of the burden laid upon the

community by the existence of such diseases and the need for a change in living or social conditions are also made manifest only by a knowledge of the cases of these diseases which occur and the conditions under which they occur.

The community is helpless to control any disease in the absence of definite knowledge of the conditions under which cases are occurring, and a health department which does not know of the prevalence of disease within its jurisdiction is a health department in name only.

As a rule the heads of health departments have been physicians. This has been so for the reason that the physician, because of his training, is the one most capable of recognizing cases of disease, and presumably knows their methods of spread and the means by which they may be controlled. There is no doubt that a man with a medical education has a better foundation upon which to build the special knowledge necessary to make an efficient health officer than one trained in other lines.

The work of the health officer, however, requires special knowledge of diseases and their prevention or control. At the present time the courses given by even our best medical schools furnish to the student but little opportunity to acquire any but the most superficial knowledge of the prevention and control of disease in its relation to the community. To so great an extent has this been true that it is quite probable that the advances made in public health administration in this country have been due as much to the demands of social workers for efficient health officers as to any influence which medical practitioners may have had.

The action taken during the last few years by a number of the largest medical schools in the country in providing courses in preventive medicine for the training of health officers has without doubt been in response as much to the demands of social workers and other nonmedical persons as to any influence which has come from the medical practitioner. This is not said in a spirit of criticism. It is only what one would naturally expect.

In a way the social worker can properly be expected to be more interested in, and have a more thorough understanding of, the need for the establishment of efficient health departments and the prevention of disease, than can the practicing physician. The practicing physician encounters disease in detail. He sees one case at a time. His interest is in the patient rather than in the community, and his energies are spent in attempting to relieve the patient from the physical burden of sickness. In doing this he seldom takes into consideration the source from which the disease was contracted and that the conditions which made his patient sick may still be operating to make others ill, nor does he always take into consideration in communicable diseases that his patient may be a menace to the community and endangering others. If he does recognize this he does not always feel his responsibilities in the matter. The thought which it is desired to express is that the practicing physician has his thought and attention focused on getting his patient well, and that the significance of the occurrence of a case of disease as it relates to the community in general seldom appeals to him.

On the other hand, the business of the social worker and public health worker is the bettering of the conditions under which man lives. To them the misery and sorrow caused by disease are apparent. The bearing of disease on poverty and of poverty on disease are daily seen. The sickness caused by faulty industrial conditions is being constantly brought to their attention. In their daily work the need for the prevention of disease and the possibilities of its prevention are constantly before them. The social worker and health officer see the effect of disease on the community. The physician has to do with the disease of individuals, and although the physician may in many instances have a greater technical knowledge of the origin and effects of disease, his field of vision is narrowed by the nature of his calling.

The health department is established to cure the community of its diseases and to keep it well. The individual is significant to the health department only as his condition affects the community in general. The health department can properly have

no function other than that of controlling disease in the community, and it is in this work that the practicing physician plays a vitally important part.

To control disease in the community the health department, as previously stated, must know when disease exists, where it exists, and under what conditions it occurs. To know this the health department must have a knowledge of the cases of controllable diseases as they occur. This knowledge of cases can be obtained only through the reports of the notifiable diseases made by physicians. The health department has no means of learning of the prevalence of disease other than the information obtained in this way. The health department does not go into the homes. It is not called upon to treat the sick as physicians are. Physicians are the only persons in the community who to any considerable extent come in contact with the sick and learn of the occurrence of disease.

Now, inasmuch as the health department can not do its work without information of the occurrence of cases of the controllable diseases and inasmuch as this information can be had only through the reports made by physicians of the occurrence of cases in their practice, the physician becomes an essential part of any scheme of public health administration. The practicing physician is essentially a part of the health department. This is true, whether the physician recognizes it or not, and whether the community recognizes it or not. The physician is the outpost, the picket that must give to the health department information of the approach of the enemy, his numerical strength, and his armament.

Co-operating with an efficient health officer the practicing physicians of a community have it within their power to make the efforts of the health department successful or to make their success impossible. So important is the control of disease to the welfare of the community, and so essential is the co-operation of the practicing physician through the reporting of cases, that it may be taken for granted that intelligent communities will bring about a satisfactory co-operation in this work between the physicians and the health department. It is only a question whether a public spirited, humanitarian medical profession will take the initiative and voluntarily and cheerfully accept and carry out its responsibilities, as it undoubtedly will. Any other course is inconceivable. Certainly upon the attitude of the medical profession in this matter will largely depend its relations to the community in the future.

The practicing physician who fails to report a case of a communicable disease thereby endangers the welfare of the community and exposes others to the danger of contracting the disease, and among those thus exposed may be others of his patients. He is neither a good physician nor a good citizen, and must be considered as opposed to the principle of the control of disease and the protection of the community for which the health department stands.

With the help and co-operation of the practicing physician the health department can do much to prove the truth of Pasteur's statement that it is within the power of man to cause all infectious diseases to disappear. Without the co-operation of the practicing physician the health department can do but little.

FIELD WORK OF AN ONTARIO DISTRICT MEDICAL OFFICER OF HEALTH

By DR. ROBERT E. WODEHOUSE

Ontario District Medical Officer of Health, Fort William, Ont.

IN APPROACHING this subject the writer is taken back to his third-year medical student days. The University of Toronto professor of hygiene then referred to a more satisfactory state of sanitation, both municipal and provincial, which would follow if the suggested plan of grouping counties into sanitary units with full time health officers and a local laboratory, were carried out. The Province of Quebec undertook to establish ten sanitary districts in that province with provincial officers in charge of each. They stipulated that each applicant or appointee must possess the D. P. H. qualification and up until the end of two years, I am informed, they had appointed two officers.

It fell to the lot of our worthy president, Dr. McCullough, to obtain for Ontario its present organization. His department decided to choose (please pardon the following on the score of a writer's privilege), suitable medical men of maturity, general diplomacy and executive ability. They were, after appointment, to be trained in the special work to be done. The statutes call for ten districts to be established, and seven were outlined for a commencement. The seven men were given a four and a half months' course of special tuition at Toronto University. Since the completion of this course the seven men have been working with the central members of the department with exactly the same methods, in one unit, in the carrying out of the advantageous program decided upon.

The instruction consisted of three hours morning laboratory and didactic work under Dr. Amyot, Professor of Hygiene, University of Toronto, and three hours afternoon work with Dr. McCullough or his assistants on the legal and executive part of the duties. Visits were made for practical sanitary survey work and inspection of sanitary plants and utilities in different parts of Ontario and the United States.

The first duties undertaken as routine pertained to making complete sanitary surveys of all the organized municipalities in the several districts. Detailed reports with maps, sketches and photographs were obtained in duplicate; one set was forwarded to Head Office and the other was kept on file in the District Offices.

These surveys covered the following subjects in minute detail: Actual populations, nationality of residents, activity of medical officer of health and Board of Health, how the vital statistics are kept, management and sanitary condition of all public institutions, nature surroundings, equipment and supervision of private and public water supplies, as well as the condition of other food supplies. The sewerage system, garbage collection and treatment, conditions of streets, lanes, vacant lots, ponds, lakes, streams and schools, were investigated. Reports included the nature and conditions surrounding the harvest and distribution of ice supplies, the sanitary facilities offered for patrons of railways, steamboats, apartment houses and hotels, and finally the epidemiological history of the community, both as to man and animal.

The special work pertains to investigating causes of epidemics, stamping out the same and instituting municipal organization to prevent them occurring. It also entails the educating of municipalities to the necessity of live health organization and equipment, the instruction and enthusing (if the word is permissible), of the local medical officer and sanitary inspectors, the lecturing to schools and public meetings, the investigating of railway and steamboat drinking waters, the inspecting of summer resorts and the sanitation of construction camps.

The results of the organization are considered by those higher up as very hopeful. Dr. McCullough can at least now attempt detail work in this large province, so vast in area. None are quite so well aware of the innovation of this detail work as some of the delinquent (as to sanitation) municipalities. Speaking of district No. 7, to which the writer is attached, the municipal health organization is found in a higher state of development in the newer, more progressive communities than in the older settled, more eastern localities. The prices and quality of dairy and butcher products are better (that is, lower price and better quality) the nearer the area (municipal) is situated to a sufficiently developed farming community to be able to supply the demand. Cold storage in this district spells poor product and high price. Thessalon, Ont., fought out this matter on a boycott plan, almost exterminating the cold storage retail store and at present has the finest meat procurable in this district and the price per pound lowest.

Five municipalities in district No. 7 have installed plants for the chlorination of the water supplied the public, in response to orders issued within the last six months. Three municipalities have regulated, changed location or installed nuisance grounds. The railways have undertaken to administer typhoid vaccine to their employees, the vaccine being furnished by the provincial laboratories free. They have cleansed the sites of boarding camps and cars, have established sewage treatment plants at their divisional points and are reporting surveys of the sources of the water supplied to the rolling stock crews and passenger trains. The water offered in dining cars, standard and tourist sleeping cars, as well as day coaches is being sampled for laboratory examination and water condemned when unfit for use. Summer resorts have been inspected and the shore and other water supplies available have been sampled and examined.

At least an attempt is being made to cope with the many phases of the work presenting themselves, even going so far as to test out hourly the results of the chlorination of water being carried out by municipalities. The field is large, the epidemiological side of the work is open to endless improvement, but at the end of three years, under the guidance of Dr. McCullough surprisingly good results will have accrued.

August 14, 1913.

CHILD WELFARE

By JOHN THOMSON, M.D., F.R.C.P. Edinburgh

Physician to the Royal Hospital for Sick Children, Edinburgh

IT is, of course, unnecessary for me to commend the subject of "Child Welfare." We are all agreed that none of the country's assets are comparable in value to its children. Beyond all doubt they are its most precious possession; for the nation that is going to lead the world in the next generation is certainly that which, in the present, is rearing, and rearing wisely, the largest number of healthy, happy and well-principled girls and boys. This is being increasingly recognized, and it is not without good reason that ours is called "the children's century." Still, there is a great deal yet to be done, and in the general struggle of modern civilization for money, excitement, pleasure and power, there are hosts of little children who are not getting anything like a fair chance in life.

Our business, I take it, is to consider how we can best further the excellent work of those who are trying in all sorts of ways to reach out a helping hand to those children who, from no fault of their own, are getting the worst of it in the struggle for the normal and happy life which is their birthright. "Child Welfare" is a wide term. It includes in its scope everything that concerns children, normal and abnormal, healthy and unhealthy, fortunate and unfortunate.

To begin with, it has to do with the care of those who are about to become mothers, that the baby may have a fair start in life, and it is also concerned with the various agencies, such as Schools for Mothers and the organization of Health Visitors, which try to guide parents into wise ways and to keep them from the thoughtless errors which are so apt to have fatal results and to increase infantile mortality. It deals with Day Nurseries, with the Nursery Schools which have been so successful on the Continent and which are probably soon to be tried in this country on a larger scale than hitherto, and with Kindergartens and Play Centres and open spaces. "Child Study" is another of its interests.

Then there is the question of the Feeding of Children, especially the large subject of milk in all its bearings on health and disease; and the preparation of cheap food of suitable composition. There are also the diseases which result from improper nourishment, like rickets and scurvy, and those which, like tuberculosis, come from infection either through the food or otherwise. Home care and clothing, sick nursing, home hygiene and personal hygiene (including dentistry), must not be forgotten, nor school hygiene in its modern developments, such as open-air schools, the various forms of physical training and school clinics, and the control of those common infectious diseases which are so apt to spread among school children.

While such aspects of the care of the ordinary normal child constitute the greater part of our theme, there is also another important group of subjects which relate to those children who in one way or another have been more or less heavily handicapped in the race of life. The blind, and the deaf, the cripples and invalids, the mentally defective and the epileptics; and lastly the friendless and illegitimate children whom nobody wants, who sometimes need our help quite as much as any of the others. The various types of physically and mentally defective children are naturally of special interest to a medical man, but I must not allude further to them. I should, however, like to say a word or two about the class of children which I mentioned last.

When the committee of this Section began to consider which would be the most interesting and useful matters to discuss at our meetings, there was a strong and

unanimous feeling expressed that the care of neglected illegitimate children in towns was perhaps one of the most urgent subjects that could occupy our attention. It was with great disappointment that we found that it would not be possible in the time at our disposal to collect the necessary facts to make a discussion of this subject really effective, so that it had to be given up in the meantime. It is, however, a matter which needs and is bound sooner or later to receive more consideration than has yet been given to it in this country.

In Scotland there are a great many illegitimate children, and while the large majority of them are regarded with kindly consideration, and all that can be done is done to lessen the disabilities and hardships which are inseparable from their position, there remains a not inconsiderable minority—especially in large towns, which form a familiar class in all children's hospitals and dispensaries—those, namely, who have no compassionate relatives or friends to care for them. We see them brought back and back to the hospital from week to week, from month to month. At birth many of them at least were as healthy and promising as any children could be. You would say they had the making in them of excellent citizens; but some way or other they never got on as well as the others did; even when in the charge of kindly mannered persons their home treatment was managed with unvarying ineffectiveness, and they went steadily down until a large proportion either died or became incurable, life-long invalids. The longer one serves on a children's hospital staff the more unsatisfactory does this state of things appear.

The Children Act and other examples of beneficent legislation have certainly been of great value in strengthening the willing and able hands of the inspectors of the poor in dealing with this matter, but still in the present state of the law they are quite powerless to deal effectively with a large number of the cases. Those are a source of great trouble and expense to the community. If the law could be got to deal with a firmer hand in this matter, it would certainly lead in the long run to considerable national economy. It has done so in other countries.

The best example of this is seen in Hungary, where the child whom nobody wants (whether born in matrimony or not) is the peculiar charge of the State, which regards his as a valuable life. The authorities, therefore, take on themselves the care of such a child and do so in such an efficient and masterful manner that he is not only kept safe from those who would harm him, but he is not allowed to become a troublesome and expensive burden on the community; for everything possible is done to improve his health, his mental acquirements and his moral character, so that he may grow up a self-respecting and self-supporting member of society and a thoroughly good citizen in every respect.

THE FOUR AGES OF WOMAN

How Far Is Industrial Subjugation of the Sex Involved in Certain Phases of Feminism

By JOHN MARTIN

IN THIS and four succeeding brief articles, Mr. Martin sets forth his programme of humanism in opposition to certain implications of the modern feminist movement, as he evaluates the latter and as they bear especially upon the life and labor of women wage-earners. Mr. Martin is of English birth and took part in the Fabian movement before coming to this country in the nineties. Here he married Prestonia Mann, and together they have been active for years in civic reform, in economic movements and in education. In the course of time they have found themselves a minority among many of their old associates in standing out against what might be called applied feminism; notably in the New York school board discussions of a year ago, during the teacher-mother controversy.

At their place on Grymes Hill, Staten Island, which is now the home of three adopted children, and at their lodge in the Adirondacks, they have drafted a book to be published this spring under the title Feminism: Its Fallacies and Follies, in which they present the general philosophy of social well-being with which they approach current issues.

At a time when the war is uprooting millions of men from their homes and work, many of them never to return; when women are being put at a thousand occupations to fill the men's places—perhaps permanently; and when children must grow to maturity in the midst of war, poverty and broken homes, their espousal of the conservation of family life has more than passing significance. These articles, spirited, provocative, ranging over the whole working life of women, become then a distinctive and opportune contribution to the discussion of social reconstruction which the world at large is in for.—Editor.

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I.—THE INDUSTRIAL SUBJUGATION OF WOMAN.

CHANGES in the economic status of woman in western society are proceeding apace. Some with blare of trumpets; others without observation. And those which are unnoticed are sometimes the most revolutionary.

Paradoxically enough, while medical schools, law schools and theological seminaries were entered with loud huzzas after prolonged bombardment by a few hundreds of women, the factory, machine-shop and store, eagerly thrown open by thrifty proprietors to those who would work for the lowest wages, were occupied by hundreds of thousands of women without agitation or tumult.

But, the invasion accomplished, it has become an integral part of the woman's movement: It has found its philosophers, its glorifiers, its poetesses. To-day the struggle for the so-styled "economic independence" of woman is an accepted part of what Mrs. Carrie Chapman Catt defines feminism to be: "the revolt against the barriers which laws and custom have interposed between woman and human freedom." Any work for wages, however onerous, is extolled as "economic independence," an indication that the woman is freeing herself from her age-long subjection as a "mere female" and asserting her dignity as a human being.

In their laudation of money-earning and their exaltation of woman's out-family work, feminists glimpse hazily the lot of the millions of wage-earners and gaze fixedly, until hypnotized, on the shining instances of highly salaried earners. Overmastered by their own yearning to fill high places of responsibility, they assume to speak for womankind and wail to the world that the whole sex longs for more work. "We women, to-day, demand all labor for our province," exclaims Olive Schreiner, with the fervor of italics, over and over again.

This demand, she says, is in pursuance of "an endeavor on the part of a section of the race to save itself from inactivity and degeneration." Women are threatened with moral death by "parasitism," by living without labor, idly sucking sustenance from man. And this dread fate "threatens vast masses" of women and "may, under future conditions, threaten

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the entire body." For, while "female parasitism in the past resembled gout—a disease dangerous only to the overfed, pampered and few, never to the population of any society as a whole"— in the next fifty years "it is inevitable that not merely a class but the whole bodies of females in civilized society must sink into a state of more or less absolute dependence on their sexual functions alone," unless, indeed, women, stirred by the preaching of feminists, "grasp the new forms of labor and procure all labor for their province." (Woman and Labor, page 115.)

Already they are conquering in a variety of industries and President Cary M. Thomas, of Byrn Mawr College, is "sure that in two or three generations, practically all women will either support themselves or engage in some form of civic activity." (Educational Review, June, 1908.)

Indeed, woman may supersede man as the provider since it is possible, as Olive Schreiner foresees, "that with the smaller general bulk and the muscular fineness and the preponderance of brain and nervous system in net bulk over the fleshy and osseous parts of the organism, which generally characterize the female, go mental qualities which will peculiarly fit her for the labor of the future." So that, magnificent to relate, "it is quite possible that, taken in the bulk and on the whole, the female half of humanity may by virtue of a structural adaptation be found more fitted for the bulk of human labors in the future." (Woman and Labor, page 116.)

Then let man beware. The blight of parasitism will next attack him.

In one of the gospel books of feminism, Charlotte Perkins Gilman deplores that "we are the only animal species in which the female depends on the male for food, the only animal species in which the sex relation is also an economic relation." (Woman and Economics, page 5.) This difference, she argues, puts woman a little lower than the brutes; for by this dependence on husband for support, "woman has been checked, starved, aborted in human growth, and the swelling forces of race development have been driven back in each generation to work in her through sex functions alone." (Woman and Economics, page 75.)

So it is the traditional family, in which the father is head of the household and supplies the livelihood, which threatens woman's degradation—a degradation already, alas, far gone. Home-keeping mothers are a disgrace to their sex, it appears, and a menace to humanity, so subdued to their own shame that they are unaware of it. "We carefully maintain among us an enormous class of non-productive consumers—a class which is half the world and mother of the other half. We have made for ourselves this endless array of horse-leech's daughters, crying 'Give! Give!'" (Woman and Economics, page 118.)

This kind of doctrine is equally rampant in England. The London Fabian Woman's Group, all ardent and well-educated feminists, after prolonged consideration and the discussion of many papers, flatly indorse the wage or salary-earning self-support of all women, single or married, widowed or divorced. "Looking forward to a time when each individual shall be economically independent," they work to "bring women into line with men in the advance towards paid work for all;" and believing "economic independence to be the one remedy for various social ills," they are endeavoring to establish that "this solution must ultimately be accepted by all those who believe in the equality of opportunity for all citizens irrespective of sex." Suffrage without wage-earning is to them vain. (New Statesman, February 21st, 1914.)

At the root of the feminist demand for "all labor for woman's province" is the complaint, made in anguish and bitterness, that man excludes woman from lucrative opportunities in the business world solely on account of her sex. Law and custom, based on man's preferences, she laments, shut against her the avenues into life's richest careers. Feminist please imply that on every side woman's ambition is restricted by a statute of limitations. Certainly in America, that supposition has scant foundation.

Not statute law but natural law bars women from eminence in industrial life. And nature will not be gainsaid. For her own purposes, she has endowed the male with muscular strength, with pugnacity and adventurous spirit, with conquering

will and with vaulting ambition. She does not handicap him for commercial contest by a periodic drain upon his strength. He can fight with competitors day by day, year in and year out without respite; he can plan long campaigns and follow them to the fatiguing and distant end without exhaustion. No baby drains his vitality or paralyzes his roaming spirit.

The family responsibilities which are inescapable if the race is to endure exert opposing influences on the man and the woman for success in commerce and industry. They debilitate her, they invigorate him. They pull her back into the home; they thrust him out into the world. They bid her be reposeful; they bid him be adventurous. His fatherhood but stimualtes his energies and adds courage to his enterprises. While the woman is enduring the pangs that have compelled her withdrawal, perchance at a critical moment, from her outside undertaking, he is braced for her sake to more strenuous effort. While the infant to feed its own life is sucking the mother's strength, it is adding strength, by its helpless appeal, to the father's determination.

Few occupations offer chances either to men or to women for winning national distinction or considerable fortune. In the employments which engage the mass of workers at weekly wages woman's competition with man in office, store and factory has meant for woman the occupation of the lowest places at the meanest wages. Wherever skill, experience, brains and leadership yield large incomes, there she is in a trifling minority; wherever weakness, unskilfulness and ignorance are worst exploited, there she is in overwhelming majority. In the sweated trades, which starve the workers for an inhuman length of work day, woman, not man, is the chief victim. Only her children endure similar privation and fatigue.

Everywhere the women work for less remuneration than men in similar callings and hold only the more monotonous and less responsible posts.

"Those who enter gainful employments as girls of from fourteen to eighteen," writes Prof. Henry R. Seager, president of the American Association for Labor Legislation, "may marry before they reach the age of twenty-five. With this possibility before them, they have less incentive than boys to learn trades. The consequence of these two facts, reinforced by the inferior strength of women, is that they are able to command wages which average about one-half those that are paid to men. This means for most girls and women who have to be self-supporting, a heart-breaking and health-destroying struggle. Underpay and the correlative overwork are the common lot." (Introduction to Women in the Bookbinding Trade, by Mary Van Kleeck.)

A humanist programme for women in industry, a programme consistent with her own natural and happiest development and with national and racial welfare, must take cognizance of

1. The industrial conditions which are inimical to all girls and women;

2. The special conditions applicable to women at different stages of life, under which they may beneficially be wage-earners.

The fundamental fact which must control the humanist determination of woman's place in industry is that nearly every woman is a potential mother. Even those women who are unhappily sterile must be considered through most of life as potential mothers, for only prolonged experience can prove their sterility. This potential motherhood is woman's prime social value, of higher worth to her and to the nation than any quantity of cotton she can spin, or ledgers she can balance or ribbons she can sell across the counter.

To the maintenance of her power for healthy, happy motherhood, every other factor in her life must be subordinate. Law and custom should distinguish, with eternal vigilance, in matters industrial between man's place and woman's place. Woman's prime difference from man, instead of being ignored, as feminists demand, should be more and more watchfully considered.

For woman cannot sell her labor power without affecting her sex power. "The heart-breaking and health-destroying struggle" which, Professor Seager testifies is the lot of "most girls and women who have to be self-supporting," unavoidably involves damage to their powers of maternity. A man may be terribly overworked without affecting his power for paternity.

He may toil for twenty-three hours and yet become the father of a healthy child in the twenty-fourth hour. He may stand the live-long day at a machine and subsist on black bread and water, and still beget vigorous babies.

But a woman who similarly stands all the long day before an unwearying machine cannot bring forth healthy offspring. She has sold something which her wages have not paid for, never could pay for—the life and vigor of the next generation.

Employments not so mechanical but yet exhausting have their proportionate effects upon the woman's highest function. Appallingly common are the cases of girls with tense nervous organizations and delicate brains whose latent maternity has been rendered a torture by the exhaustion following on their conscientious obedience to the demands of school and college, of social work or society life.

No industry is suitable for any woman nor should be open to her, which overstrains her female organs, drains the vitality which she will need at her supreme moment or so denatures her as to make motherhood distasteful.

"Every employment open to women," is the motto of feminism. "No employment open to women unless proven non-injurious," is the motto of humanism.

Already, a hesitating start has been made in fixing the humanist conditions under which an industry shall be closed to women. Women are forbidden by law in civilized states to work underground in the dark and dirt of mines. They are usually excluded also from the poisonous dangers of white lead works. In America, they are forbidden to incur the moral dangers of service behind a saloon bar. In six states, New York, Pennsylvania, Indiana, Nebraska, Massachusetts and Oregon, though the law has not yet run the gauntlet of the courts, they are not permitted to work in factories or workshops by night; in a number of states woman's maximum hours of labor are legally less than man's maximum hours.

Her constitutional right to contract for the sale of her labor has been limited, with the approval of the supreme courts of various states and of the United States, as man's right cannot be constitutionally limited, under the exercise of a police power which takes cognizance of the basic fact that as the federal Supreme Court said "Woman's physical structure and the performance of maternal functions place her at a disadvantage in the struggle for subsistence."

Even these tentative restrictions are condemned by the straitest sect of the feminists, who are prepared to face unflinchingly the sufferings of their sisters caused by a rigorously logical application of the doctrine of equal treatment for men and women! The Equality Alliance of New York, whose membership includes teachers, editors, professors and writers of influence, proposes an amendment of the state constitution which shall make it impossible to deny by legislation "any civil or legal right to any person on account of sex." They would even thus prevent, if possible, the enforcement of the humane law which forbids the employment of a woman in factory, store or shop for a few weeks before or after a baby is born to her, since it is by nature impossible to make that law applicable to man.

Truly, they have the courage of their feminism. In like spirit some women's organizations in London, headed by eminent ladies, actively opposed the closing of the saloons against women up to 11 a.m. during the war, a step taken to check the increasing drunkenness among women. They argued that women should not be denied any opportunity to get drunk which men enjoyed.

On the other hand, pioneer humanists have proposed far-reaching extensions of this sex discrimination in favor of womankind. A section of the National Conference of Charities and Correction has approved the legal prohibition to women of work which requires continuous standing. Settlement leaders have declared that work as store clerks is specially unsuitable to girls and women. (See Young Working Girls, edited by Woods and Keene.)

If only these two proposals were adopted, what an exodus of women from the land of bondage would commence! In the United States nearly two hundred and fifty thousand saleswomen alone would be liberated; and from every steam laundry, cotton mill, woolen mill and silk mill, pale-faced women would emerge into the sunshine.

Only scientific and prolonged inquiry can determine which employment can be undertaken by women without deranging their peculiar and radically essential powers, and over-stepping the limits within which the employments open to them are safe for them and for posterity.

From all poisonous occupations they should evidently be excluded. For women are peculiarly susceptible to industrial poison to expose them to the fumes of lead, arsenic or phosphorous is more murderous than to expose their brothers and husbands to these fumes.

From some of the most dangerous employments—caisson sinking for deep foundations, in which work under compressed air causes a painful disease called the "bends;" structural iron-working on bridges and skyscrapers; as brakemen on railroads; rollers in steel mills, and laborers around smelting furnaces—women are already protected by custom and by muscular weakness; for the bizarre and startling instances discovered by the census of odd women engaged in such virile occupations are only negligible exceptions—analogous to the cases in which men don corsets or daily give the baby its bath.

How unsafe it is to assume the suitability of the most alluring and seemingly light and cleanly work to woman's organism, is indicated by the report of the Canadian Royal Commission that in the telephone service "the breaking point of the operator's health is not far from the breaking point of efficient work." When the breaking point of the female operator's health is approached, her potentiality for motherhood, the gift which raises her in social value above man is in imminent danger, and society must intervene for the sake of its own permanence.

Hitherto the rule has been to permit in blind stupidity girls and women to be lured into any occupation where their labor could be utilized, and later, when the evil effects were too conspicuous to be ignored, timidly to curtail the damaging conditions. Humanism would make a survey of all industries with respect to their influence on women workers and would permit no industry, either new or old, to engage female workers unless licensed by a medical and scientific board as "non-deleterious—may safely be taken in doses as set forth on the license."

Progressive states, in order to conserve the worker's general health, require a statutory minimum of light and air and ventilation and sanitary conveniences in work places where women are employed. But these requirements are in vain when the whole working process undermines their powers. The thorough application of the humanist principle that the woman's vigor and maternity shall not be sacrificed, necessitates the barring of all conditions which militate against the potential mother's life.

Though there be found occupations in which women may engage without injury to their maternal powers, it does not follow that a woman can with social safety and to her own ultimate advantage, follow them all through life.

Woman's working life is naturally divided, as man's is not, into four stages: First, the period before marriage when, her formal education being finished as far as her parents' means will allow, she is waiting for her romance and womanly realization, and has a few years for money-earning work.

Second and third, her married life, when, normally, for her own best development and sweetest joy and for society's preservation, she will bear and rear a family. From an economic standpoint, we have, unfortunately, in reality two stages — before and after the children come.

Fourth, her later years, after her physiological climateric when, her children matured and leaving the home she made for them, she still has vigor and capacity that may be utilized for the social good.

These four we will consider in order in future papers.

The succeeding articles will in turn take up:

II. Woman's Work Before Marriage.

III. The Married Woman in Industry.

IV. The Mother in Industry.

V. Woman's Work in the Autumn of Life.

SANITARY CONDITIONS IN RURAL SCHOOLS

By THOMAS J. McNALLY

District Medical Officer of Health, Ontario

WE have in the subject before us perhaps the most delicate problem confronting the local medical officer of health in rural municipalities since it dovetails into the duties of school trustees, the public school inspector, and the teacher, while it touches that most sensitive organ, the ratepayers' pocket book; surrounded thus on all sides by delicate sensibilities to inaugurate improved sanitary conditions requires more than ordinary tact which we are pleased to note has not been found wanting in our local officers.

Such remarks as we purpose making are intended to apply to the ordinary one-room country school ("The Little Red School").

While recognizing in the broadest aspect of our subject the intimate relationship between the mental and moral welfare of pupils and the physical or more strictly sanitary condition, we purpose confining our remarks to the latter phase of the subject as it more particularly concerns us.

With this limitation in mind, our first consideration will naturally be given to the school grounds. These should be dry, level, well-drained and sufficiently distant from stagnant water, nuisance ground and all such unsanitary conditions.

The grounds must at all times be kept clean and free of any condition that might provide food or a breeding place for flies or rodents. In area they should be of sufficient extent and arrangement to allow ample room for different games to be engaged in, at the same time thus providing for the necessary exercise for the proper development of the body and relaxation from mental effort, as well as incidentally developing the natural initiative, leadership and self-control of the individual pupil.

The next consideration is an abundant supply of pure and palatable drinking water under the full control of the Trustee Board. When this is obtained from a dug well it should be absolutely protected from any possible contamination, especially from the top of the well, as it is thus that practically all impurities are introduced.

The well should be lined up or cribbed with cement, brick or stone, as wood when used for this purpose ultimately impares the taste, color and odor of the water. For protection from surface water or seepage the cribbing should be water-tight for at least 4 feet below the ground level and carried one foot above it. This portion of the cribbing should be constructed with a base of about 24 feet and tapering on the outer side to the width of the crib at the top, thus shedding off all water into the soil.

The cover of the well must be perfectly water-tight and preferably of cement or steel, but where wood is used it should be doubled, tongued and grooved; the cover should be fitted neatly about the pump and the joint protected by a quarter-round.

When the supply of water is derived from a drainage area or mineralized so as to require aeration, this may be provided by carrying a pipe well up the pump and perforated at the upper part.

The well thus protected will not require to be cleaned out annually, but should be emptied of water at least after the "summer holidays," since it may taste stale, and however pure, if unpalatable, will not be used by children, and plenty of water is essential to good health.

When the supply of water is obtained from a drilled well the casing should be carried well above the ground level and protected from surface water and seepage in similar manner to that described for the upper cribbing of a dug well.

Where the water is obtained from a spring it should be protected by cribbing similar to the upper part of the dug well and covered with a like water-tight platform and the water taken by means of a pump. In all cases it is preferable to have the pump at some distance from the well or source of supply, and, where practicable, within the school building, though these points are not essential to a pure supply.

In our country schools we have generally to deal with outside closets, which should be so constructed as to be properly lighted and ventilated, while flies are excluded from the building and contents.

The floor should be water-tight and at least a foot above the ground level, with a gentle incline towards the back of the building, and in the dry earth closet covering underneath the seat as well as in front of it.

The seat should be built parallel to the floor and 15 inches above it of tight fitting planed lumber and one opening should have a step in front of it so as to reduce the height to 12 inches. On the boys' side there should be one opening for each 15 boys, and on the girls' side one for each 10 girls in attendance. Each opening should have a separate automatic-closing lid and a four-inch ventilator extending from below the seat to above the roof. There should also be a breather in the end of the closet underneath the seat the door should shut automatically fly tight.

For this variety the back wall of the closet should be a tongued and grooved door from the level of the seat, hinged so as to shut fly tight, and allow for removal of the box or bucket. This container, whether bucket or box, must be perfectly water-tight and slide underneath the seat on cleats nailed to the floor. It is essential that the container fit tightly to the top and front of the seat, so that there may not be any fouling of the outside of the bucket or box or of the floor underneath the seat. With a couple of chain handles fastened to the back of the box with clinched staples and side handled on the buckets, these containers may very readily be slipped onto a float or stone boat, removed to a suitable location and the contents disposed of with the minimum of annoyance, providing that lime, ash or dry earth has been properly used.

This is constructed in a manner similar to the dry earth closet, except that instead of the floor and box or bucket underneath the seat, a cement, water-tight vault not more than two feet deep from the top of seat is provided, the back wall extending to the rear of the closet on an upward incline so as to provide easy access for removal of contents. This incline having a waterproof lid, fitting fly tight, secured with hasp and padlock.

There should also be provided on the boys' side in the closet, or an adjunct thereto, a porcelain, slate or smooth cement urinal placed on an incline and having a pipe leading from the lower end to a field tile drain 15 inches underground. This urinal should be at least 10 inches wide at the top, four feet long for the first 12 boys, and an additional foot for each twelve after the first. It should be inclined from 12 to 16 inches from the floor and the floor underneath and at least two feet beyond should be of smooth cement finish, with an incline to an outlet reaching the tile drain by pipe.

For definite measurements of these closets, consult the pamphlet, "Sewage Disposal," issued by the Provincial Department of Public Health, Ontario, and for their proper location see "Accommodation and Equipment of Rural and Separate Schools," Sec. 2, issued by the Ontario Department of Education.

Finally we come to consider the school building and the sanitary conditions thereof. It requires to be so constructed as to be warm in winter and yet capable of proper ventilation without direct draughts upon teacher or pupils. There should be at least 16 square feet of floor space and not less than 250 cubic feet of air space for each pupil on the school register, and the minimum height of the room should be 13 feet.

The class room should be oblong and have a south or southeastern exposure, with light admitted on this side only, or in case additional light is necessary, it should be obtained from the rear blinds being provided and used on bright days on these windows.

The seating must be arranged so that the light is received over the pupil's left shoulder, the outside row of seats at least 3 feet from the wall, and bearing in mind that proper light is only thrown across the room one and one-half times the height of the window, and that the window area should be one-sixth of the floor space. This consideration requires that the whole left side of the room, except 6 feet at either end and 4½ feet from the floor, be utilized as window, the sash being of metal so as to allow for as large a volume of light as possible.

The floors should be tongued and grooved, preferably of hard wood and tightly jointed and laid.

Heat may be supplied from furnace beneath the school room or by stove with cold air ducts from outside; if by stove it should be jacketed by asbestos lined galvanized iron so that as nearly as possible the heat may be distributed equitably to all parts of the room, and this heat regulated by thermometer, about 67 degrees F. being considered satisfactory where children are wearing house clothing.

All windows and doors utilized for ventilation should be screened fly-tight and the window sill at least 4½ feet from the door. The window should be on weight and pulley, and have a shield placed so as to direct the air current and prevent draughts. Should the window consist of one frame and not carried on weight and pulley, then a sufficient number of the panes should be arranged to drop by cord for purposes of ventilation as it is desirable to have a complete change of air three times an hour. As in few of our country schools has any attempt been made to install any modern system of ventilation, we will not attempt to develop this part of our subject any further.

This is perhaps the most neglected, yet one of the most important points of our subject, hence we must direct your attention to the necessity for having a proper arrangement for drinking water so as to remove that abomination, the open pail and the common drinking cup.

The simplest solution, yet really only a half measure, is a covered porcelain can with handle and tap, while each pupil is required to provide his or her individual cup. A better and more efficient solution would be to raise the water by force pump to a small double walled tank, thus giving head and supply for a proper sanitary drinking fountain, having the overflow carried off to a small underground field tile drain. Such an arrangement could be installed at small cost, and with the pump in the cellar or the porch would constitute an improvement much to be desired.

Basins and Towels With Soap.

Here again we have a sanitary convenience most essential yet commonly neglected in our schools, as few indeed of our rural schools until quite recently made any provision for either teacher or pupils to wash their hands except such as the pump and a convenient part of clothing provided. There should be separate apartments with basin and soap. Sanitary toweling for the boys and the girls, with a proper soil pipe emptying into tile drain from the fountain overflow; the water might be supplied from the drinking water tank if one were installed. The necessity for these basins is so obvious that few trustees will neglect to provide them when the necessity is called to their attention.

Our Chief Officer of Health instructed us to see that all schools are thoroughly renovated or house-cleaned twice a year, and this really does seem the minimum when we consider the possibilities of contamination by numerous contacts as well as from the amount of dust of all kinds allowed to settle and frequently to remain on walls, ceiling and furniture.

The School Act requires the floor to be scrubbed quarterly, which, to my mind, is entirely inadequate. Why should not cleaned at least weekly; that is as frequently as the ordinary kitchen floor.

Before concluding, we would direct your attention to the necessity for supervision of the seats and their adjustment to the size of the individual pupil. They should be single and of such height as to allow the pupil's feet to rest flatly square upon the floor when seated. There should be at least a row on either side of the room of adjustable desks and seats for pupils over and undersized.

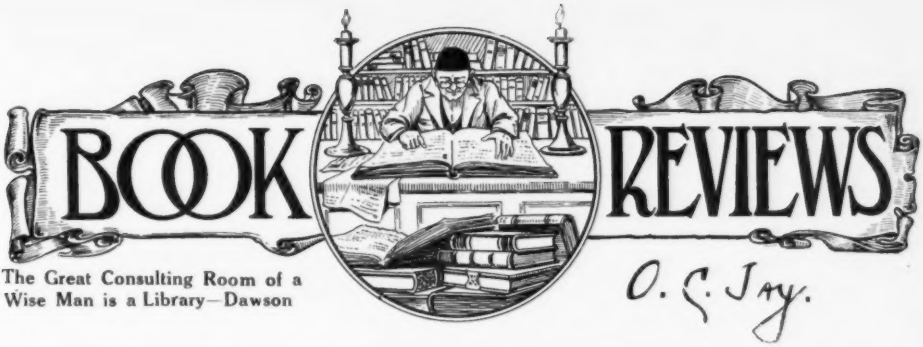
Summary of Essentials to be Insisted Upon.

First—Clean, dry and sanitary grounds.

Second—An absolutely pure, palatable and wholesome water supply under full control of the Trustee Board and perfectly protected.

Third—Closets fly-proof, properly lighted and ventilated and so constructed as to prevent possible fouling of the ground.

Fourth—Thorough renovation or house-cleaning of the school room at least twice a year.



The Great Consulting Room of a Wise Man is a Library—Dawson

AMERICAN CIVILIZATION AND THE NEGRO—The Afro-American in Relation to National Progress—By C. V. Roman, A.M., M.D., LL.D.—F. A. Davis Co.—Philadelphia—Price $2.50.

The author of this exceedingly able work is professor of diseases of eye and ear, nose and throat, in Meharry Medical College, Nashville, Tenn. He seeks to show without bias or bitterness, and succeeds in doing so with great clearness and finality, that "humanity is one in vice and virtue as well as in blood; that the laws of evolution apply equally to all; that there are no cardinal virtues peculiar to the European and no debasing vices peculiar to the African; that we are all sinners and have come short of the glories of civilization." It is very doubtful if any other race in the history of the world has made progress with equal pace with the Colored Race of the Southern United States.

The reader who doubts the equality in vice of both races may find support in chapter V., but it will not move the scale creditably on the white side. The convincing quality of the author is one of his strong points. He was generally conceded to be the ablest speaker in a great world conference held in this city a few years ago, and has a wonderful facility in neat and conclusive demonstration. The following instance might be multiplied manifold: "*Fiat justitia ruat coelum* was a motto of ancient Rome, but justice came not, neither did the heavens fall, but Rome did."

Often a new viewpoint throws a flood of light on a situation. He claims that, "It is the spirit of slavery and the spirit of freedom, and not the races that are struggling in the South." The real issue is covered by a false one in the case of those who for personal reasons wish to becloud the truth. Nevertheless, "in refusing to be just we lose our opportunity to obtain justice."

Among many luminous quotations with which the author has enriched his work are several from the excellent verse of Paul Dunbar, the poet of the Colored Race. The conclusions at which our author arrives in this most readable classic, for it is sure to be regarded as authoritative, are stated as follows:

"There is nothing in blood, belief, conduct or history of the Colored Race to disqualify him for full citizenship. To grant this will not in any way endanger the integrity of either race. It is best for the two races to work together peaceably and constructively in politics and economics, leaving personal and social matters to adjust themselves as all wise people have done throughout the world." A. D. W.

SOCIAL PROGRESS AND THE DARWINIAN THEORY—A Study of Force as a Factor in Human Relations—By George Nasmyth, Ph.D.—With an Introduction by Norman Angell—G. T. Putnam's Sons, New York and London—$1.50 net.

A notable and timely book. Ever since Darwin's theory of "the struggle for existence" and "the survival of the fittest" revolutionized man's conception of human origin and development, the disciples of Force, the militarists, have held and have been supported generally by materialistic philosophers and sociologists, that the chief factor in human progress has been and is, war or collective homicide.

Darwin observed with dismay the ever widening misinterpretation of his message, and did his best to counteract it. Towards the close of his life he pathetically said: "I am beginning to despair of ever making the majority understand my notions . . . . I must be a very bad explainer."

Dr. Nasmyth tells us that he has drawn largely from the crushing criticisms of the so-called "social Darwinism," by the great Russian sociologist, Novikov, and so he has, but that fact does not detract from the value of his work.

It is made clear that in "The Origin of Species," Darwin confined himself entirely to the field of biology and made no application of his theory to human relationships; and that his theory of social progress is contained in "The Descent of Man," published twelve years later. As early as 1864 he wrote to A. R. Wallace this passage:

> The great leading idea is quite new to me, viz., that during late ages, the mind will have been modified more than the body; yet I had got as far as to see with you that the struggle between the races of man depended entirely upon intellectual and moral qualities.

But the whole of the splendid exposition and argument needs to be read and digested to be fully appreciated, and we earnestly urge our intelligent readers to procure the volume.

EDITORIAL

Ontario Medical Association.

The meeting of the Ontario Medical Association in May, under the presidency of Dr. H. B. Anderson, promises to be one of vital interest to the medical profession. There is too great a tendency of *laissez faire* with many practitioners and a strenuous effort to rectify legislation after it is passed, e.g., the Workmen's Compensation Act. The policy regarding medical education in Ontario will be decided during the next year and will probably be the policy for the next hundred years, or longer. Is it not the bounden duty of every physician practising in Ontario to consider as thoroughly as possible every phase of the question and use his utmost influence and advice in directing this legislation? We must remember we occupy a unique and enviable position in the estimation of the public. If we fail to protect them against the absurd claims of the various cults of quacks which are seeking recognition in this Province will they not have been worshipping false gods? Make it a personal matter, doctor. We know you are busy, cannot get away, etc., etc., but come anyway—fighting to protect the interest of your confreres at the front is less dangerous than fighting in Flanders.

ONTARIO MEDICAL ASSOCIATION

Arrangements for what will probably be the most notable meeting in the history of the Ontario Medical Association, May 31st to June 3rd, 1916, are now well under way. The crucial interest is owing to the many matters of far-reaching importance to the profession which will come up for discussion. Among these one may refer to the Workmen's Compensation Bill. The Committee dealing with this question have the work well in hand, and there is every prospect that, with the strong backing of the profession as a whole, a satisfactory adjustment should be reached, if only the matter is placed clearly and forcibly before the Government.

It is scarcely necessary to further emphasize the importance of the questions now being considered by the Commission on Medical Education, which will include every phase of our professional activity. One may safely say there has been no juncture so critical as the present in the history of the profession since the organization of the College of Physicians and Surgeons in 1865.

In order to bring the influence of the profession througout the province to bear as fully as possible on these and other matters, a vigorous effort has been made to organize County Medical Societies, linking them up with the Ontario Medical Association. The efforts of the Committee on the Organization of County Societies have met with a fair degree of success, although a remarkable apathy is evident on the part of the profession in some sections of the province in regard to matters of such urgent professional and public interest. However, some 35 local societies are now in existence in the province, and 15 more will require to be formed to complete the provisional organization. It is earnestly hoped that the profession in these districts will take action before the meeting in May.

We are given to understand that the Report of the Commission on Medical Education will not be ready to be dealt with by the Legislature during the present session, thus leaving an opportunity for further voicing the views of the profession at the forthcoming meeting in May.

The program of the meeting, so far as arranged, is one of much scientific interest and practical importance to members of the profession. The address in medicine will be delivered by Dr. E. P. Joslin of Boston, on the Treatment of Diabetes; the address in Surgery by Dean deWit Lewis, of Chicago; and the address in Gynaecology by Dr. J. F. Percy, of Galesbury, Ill. Arrangements have been made for a symposium on "The Role of the Nose, Mouth, Throat and Accessory Sinuses in Relation to Systemic Disease." Dr. W. A. Price, D.D.S., of Cleveland, will deal with mouth infections, illustrated by a remarkable kineomatographic demonstration. "The Arthritides" will be taken by Dr. Joel Goldthwait of Boston, and "The Nose, Throat and Accessory Sinuses" by Dr. D. J. Gibb Wishart, Toronto.

Professor Blackader of Montreal will deal with "Drugs and Medicinal Agents Considered from the Professional, National and Economic Standpoints," than which no more timely subject could be brought before the notice of the profession. Dr. Justus Matthews of the Mayo Clinic will give a paper on "Tonsillectomy with its General Results." Dr. Solomon Solis-Cohen of Philadelphia will discuss "The Treatment of Pneumonia." Many papers on topics of special interest are being contributed by prominent members of the association, such as "Blood

Transfusion, Its Indications, Technique, etc."

Perhaps one of the most interesting features of the meeting will be the session arranged to deal with the "Returned Soldier's Problem," from the medical, military, vocational and economic points of view. Papers dealing with "Neurosis Among Soldiers," "The Effects of Poisonous Gases," "Results of Typhoid Inoculation." "Treatment of Cerebro-Spinal Meningitis," "Vocation Re-education and Adjustment," "Treatment of the Blind After the War," etc. At this session it is expected that there will be representatives of the various Military Convalescent Hospitals throughout the Dominion, and it is hoped to formulate general plans for uniformity of policy and procedure in these institutions. In arranging for this special session the association is assured of the hearty co-operation of the officers of the Canadian Army Medical Corps in this district, as well as the Military Hospitals Commission.

Although many members of the medical profession of the province are at present engaged in military service at home or abroad, yet the officers of the Ontario Medical Association appeal for the loyal support of the profession as a whole to make this one of the largest and most enthusiastic meetings in its history, in order to deal in the most vigorous way with the important questions coming up for consideration. If the medical profession of the province is to do its full duty during the war, if it is going to show itself capable of protecting its own interests—which are at the same time the interests of the public—and if it is to be able to do its duty in the processes of national reconstruction after the war, it must organize. Surely the last two years have ineffaceably burned this lesson into our inmost beings.

An invitation has been extended to the Canadian Medical Association to hold its executive session in conjunction with the annual meeting, and it is hoped in this way to have a larger representation from the sister provinces than has been the custom in recent years.

The medical officers of health of Ontario will hold their annual convention the day and a half preceding the meeting of the Ontario Medical Association.

Members of the profession in the province who desire to present papers or to take part in discussions are invited to communicate with Dr. C. L. Starr, chairman of the Committee on Papers and Business, 224 Bloor street west, Toronto.

The Fifth Annual Conference of the Ontario Health Officers' Association will be held in Convocation Hall of the University of Toronto on Tuesday and Wednesday, May 30th and 31st, 1916. An excellent programme is assured.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTION

HEALTH conditions will be linked with nearly every phase of the problems of charity and correction to be considered at the forty-third annual meeting of the National Conference of Charities and Correction at Indianapolis, Indiana, May 10th to 17th. One section, that on health, will be devoted entirely to a discussion, by physicians, of the part the medical practitioner and surgeon may play in social work.

Dr. J. N. Hurty, secretary of the Indiana State Board of Health, is chairman of the section of health and Dr. Theodore B. Sachs, of the Municipal Tuberculosis Sanitarium of Chicago, is vice-chairman.

In the section meetings there will be a symposium on disease, ill health and sickness, and their bearing upon crime, insanity and poverty. The relation of venereal diseases to public and individual health will be considered. A number of dental surgeons will also participate by giving their views on the relation of oral hygiene to public and individual health.

Other sections allied in subject matter to that on health will take up the problem of inebriety and the relation of feeble-mindedness and insanity to social questions.

A broad field of community problems will be covered by six other sections of the conference.

A section of unemployment will examine into the degree to which social workers are prepared for the next period of stress.

The growing tendency to put relief work in the hands of public agencies will occupy much of the attention of a section on pub-

lic and private charities. Problems connected with the organization and administration of charity work and the keeping of proper records will also be discussed.

THE HEALTH OF THE B. E. F.

IT is impossible to give too much publicity to the wonderful work done by the R.A.M.C., not only in fighting disease, but also in the carrying out of preventive measures. In two instances last week Mr. Tennant gave replies to questions upon the health of the forces, and both were eminently satisfactory. With regard to the troops on Salisbury Plain, he said: The annual ratios per 1,000 are, during the period September 1st to December 31st: Admissions, 325.4; deaths, 1.88. Both these ratios are lower than those for peace time. With such a record he was perfectly justified in refusing the request for a committee to inquire "into the health of the troops." The other question was the perennial one on enteric fever and inoculation. The reply was as follows: "In the period from the commencement of hostilities to November 10th, 1,365 cases of enteric fever were reported as having occurred amongst the British troops in France and Belgium; of these 1,150 cases have been definitely diagnosed after bacteriological examination. In 579 cases where there had been inoculation there were 35 deaths, and in 571 cases where there had not been inoculation there were 115 deaths. In the United Kingdom from August 1st, 1914, to October 30th, 1915, 540 cases of enteric fever were reported and 87 deaths; 39 per cent. of these cases occurred in men who had not been inoculated, but I cannot say how the deaths were distributed amongst the inoculated and uninoculated respectively. For paratyphoid no system of inoculation has yet been adopted." This evidence is absolutely conclusive to all, except a few cranks. But "if an angel from heaven came" they would still be unconvinced.

BACTERIAL INFECTION AS A CAUSE OF RHEUMATISM, AND ITS TREATMENT

Abstract.

The term "rheumatism," defined as "an indefinite something induced by cold and exposure, always affecting either muscle or joint, and with pain on motion as a prominent symptom," has been much abused and sadly overworked, says Dr. F. E. Stewart in the Mulford Digest. Every pain affecting the human body which could not be otherwise accounted for has been ascribed to "rheumatism."

We have been taught to differentiate between rheumatism and gout, and told that the latter is "a painful constitutional or diathetic disease, acute or chronic, with joint inflammation and chalky deposits, and an increase of uric acid in the blood," and differentiation has been made between "rich man's gout" and "poor man's gout," the former being attributed to "excess of food and sweet wine," and the latter to "hard work, exposure, ill feeding or excess in the use of malt liquors."

And now, after clinicians have been for centuries building up a wall of differentiation between "acute" and "chronic rheumatism," and another one to fence off "gout" we are told that these different diseases are not several entities but groups of symptoms caused by bacterial infection all of which may result from a septic mouth and all more or less curable by getting rid of the cause and treatming the condition.

For the treatment of streptococcic rheumatism a polyvalent bacterin may be employed prepared from different strains of streptococci isolated from rheumatic cases or a mixed or combined bacterin may be selected containing pneumococci, staphylococci and streptococci. The pneumococcus is included because the majority of patients suffer with infectious rheumatism as the result of infection from a septic mouth and the pneumococcus is invariably found associated with the streptococcus and staphylococcus in the pockets of infection existing at the margin of the gums.

For the treatment of gonorrheal rheumatism a bacterin is supplied containing the gonococcus, staphylococcus (aureus and albus) streptococcus, bacillus coli, and the diphtheroid bacilli, because chronic gonorrhea is a mixed infection and these micro-organisms are found in a very large percentage of patients. The micro-organ-

isms used for preparing the bacterin are taken from a large number of cases of chronic gonorrheal prostatisis and are, therefore, polyvalent.

Success in the bacterin treatment of rheumatism is largely dependent upon proper attention to Wright's directions in regard to accessory treatment. Wright calls attention to the fact that failure may result if proper circulation is not secured in the infected area. Nature walls off the infected area to the best of her ability to quarantine it from the rest of the body. Frequently this wall greatly hinders the circulation of the blood in the part infected by living microbes, thus preventing a serious obstacle to bacterin treatment. Methods for producing hyperemia are, therefore, often necessary. "Baking" the joints often proves helpful.

The researches of Poynton, Payne and Rosenow have done much to establish our knowledge of infectious arthritis including its cardiac and other complications. All authorities agree that with the exception of arthritis due to the gonococci the majority of cases of infectious arthritis are caused by a streptococcus.

BROWNING'S INTERPRETATION OF CHRISTIANITY

By FLORENCE WITHROW, B.A.

IT is upon the revelation of the divine love within the soul that Browning bases the salvation of humanity. He tells us our higher instincts are not "objects of suspicion, to be put into the crucible and dissolved into relics of prehistoric fear, selfishness and superstition; but they are the rifts through which the light of spiritual truth, in the hour of high emotion, streams in upon us." It is through this transparency to the inner soul-life that the true poet becomes "God's Glow-worm"—the luminous revealer of the Divine. Hence we behold Browning in the great temple of humanity as a high priest of the spiritual life. He had the wisdom ever to "hold on, hope hard in the subtle thing that's spirit." The things of the spiritual world are the enduring realities.

"Earth changes but the soul and God stand fast."

Persistently does Browning reiterate this thought. In Paracelsus he has shown that intellect without love is dead. Paracelsus has sought to know. He is the victim of an aspiring intellect, one whose ambition transcends all earthly limits. What has his desire brought him but bitterness and disappointment? In anguish at his bitter failure he cries:

"Mind is nothing but disease,
And natural health is ignorance."

To the mind of Browning the gleams of knowledge which we possess are of value only as they "sting with hunger for more light." The goal of knowledge, as of love, is God himself.

Dr. Berdoe, an eminent physician, of London, in the preface to his latest work on Browning tells of his conversion from agnosticism to Christianity by reading the poet's works. "One knows but little of the intellectual and religious life of the nineteenth century," says Prof. Mims, "who has not felt, and sympathized with, the doubt and uncertainty that come to the souls of men. This restlessness and gloom are reflected in the poems of Mathew Arnold and Clough, and in the novels of George Eliot. To go from them to Browning is to go from those who blindly grope for the light to one to whose soul has come the vision of a great light, and in whose bosom is peace."

"Browning's faith sprang from no trivial consideration of the problems of life. He felt the force of Strauss' 'Life of Jesus' but, unlike George Eliot, he had wisdom enough to see the weakness of his attack on Christianity and 'A Death in the Desert' is his answer to the German scholar."

Several years ago James Thompson, the poet, himself an unbeliever in a review of Browning, said:

"Finally, I must not fail to note, as one of the most remarkable characteristics of his genius, his profound, passionate, living, triumphant faith in Christ and in the immortality and ultimate redemption of every human soul in and through Christ. Thoroughly familiar with all modern doubts and disbeliefs, he tramples them all underfoot, clinging to the Cross; and this with the full co-operation of his fearless reason not in spite of it and by its absolute surrender or suppression."

Browning is ever conscious of the Divine Presence.

"God glows above,
With scarce an intervention presses close,
And palpitatingly his soul o'er ours;
We feel him, nor by painful reason know."

This omnipotent and omniscient force, which to Browning very surely exists, which manifests itself in limitless Intelligence, in myriad Beauty, in absolute Truth, possesses a diviner quality and shows itself in boundless Love.

"Thy love fills infinitude wholly,
Nor leaves up nor down,
One spot for the creature to stand on."

"Browning believes that the "very God," "the All-Great" is the "All-Loving" too "God Thou art Love," he says "I build my faith on that." In "Saul" he has finally interpreted his conception

of Christ as an expression of the human love and sympathy of the Divine, God feels for man with a man's tenderness and yearning. It is this "human-heartedness" of God which appears in the Christ. How wonderful are the sweet words of David, while he sings and, singing, wrestles with the kingdom of darkness, that holds captive Saul's kingly spirit, until the shepherd-poet's deep-loving insight culminates in one sublime vision of Divine Love condescending to human weakness and death for our deliverance, ever giving itself, indeed, but most fully in David's descendant, Jesus, the Christ, the Redeemer, The Elder Brother of mankind.

"He who did most shall bear most;
The strongest shall stand the most weak.
'Tis the weakness in strength that I cry for!
My flesh that I seek
In the Godhead. I seek and find it.

Oh Saul it shall be
A face like my face that receives thee:
A man like to me
Thou shalt love and be loved by, forever:
A hand like His hand
Shall throw open the gates of new life to thee
See the Christ stand."

In "A Death in the Desert" the prophetic utterances of David have to the aged and dying apostle been realized in the Christ, by whom he was loved and with whom he lived. To the old man the story of Christ's life and death is not mere history. "It is, is here and now." His soul is suffused with the ever present spirit of Christ who he believed was the visible God, made flesh for man.

What a strange belief had Browning in the truths of Scripture, and what a reverent faith in a righteous heavenly Father! Mary Cohen says: "Never has a poet absorbed religious verities to reproduce them in language so virile, in argument so convincing, in magnetism so riveting as he!"

As love is God's most precious gift to man, so it is the clearest disclosure of God's essential nature. Without it, indeed, God would be unworthy of our reverence, no matter how infinite His power and majesty.

"The loving worm, within its clod,
Were greater than a loveless God
Within his worlds."

This is the sublime truth of Christianity—its picture of a God who overflows with pity for our infirmities, through whose thunder there comes the human voice of tender compassion saying,

"O heart I made, a heart beats here."

This power of love pervades Browning's poetry. In Paracelsus he depicts the inner life of a man, who, with every earthly gift, sank and failed because he made no account of love in his dealings with mankind.

"I learned my own deep error; Love's undoing
Taught me the worth of Love in man's estate."

Again in "Saul" we find the tender, yearning shepherd-boy proclaiming the existence of wondrous Divine love. Love in God and love in man are the same in essence; pure, illimitable, and free in God; clouded, limited, and obstructed in man; nevertheless the same thing, only differing in degree. In "Christmas Eve" the leading thought is the ever present sympathy of a Divine love with all sincere forms of human worship. No matter how humble and imperfect our service, it shall be accepted by the all-loving father. What a splendid lesson of broad charity and tolerance this poem gives! a tolerance which as a result of love learned by contemplation of the human-divine-love, can overcome all intellectual variances and fastidious repugnances of taste.

"Browning," continues Prof. Mims, "would not be considered an orthodox churchman. He was 'too heterodox for the orthodox, and too orthodox for the heterodox.' One does not find him much exorcised over higher criticism and evolution, for instance; but he everywhere lays stress on the fundamental facts of the spiritual life—the soul, with its temptations, its struggles with evil, its progress or decline in spiritual power, and its longings for immortal life; with God as a very present help in trouble and with Christ as the Way, the Truth, and the Life. Of these he has sung in poems that have in them the thrill of genius and at the same time the devotion of a saint. These high ideals are incentives to his

noblest characters, and they come now and then to the surface in the hearts of the most hopeless outcasts. We do not misread his poems when we say that the words of the dying John to his faithful companions are his own.

"I say, the acknowledgement of God in Christ
Accepted by Thy reason solves for thee
All questions in the earth and out of it,
And has so far advanced thee to be wise."

Yes, to Browning Christ was "very man and very God." He understood the difficulties in the way of accepting this faith. Neither the mystery of the immaculate conception, nor the problems connected with the authorship of the Gospels, nor the discrepancies of the text could shake his faith in the eternal truth revealed in the incarnation.

Browning demanded a loving, personal God, who hears man's prayers and comforts his soul. How he does cling to the idea of man's intimate and infinite need of God. One who has not noticed the point especially will be surprised to see how many times there is in Browning's poems the cry of man for God in the midst of the perplexities of this life. The hero in "Pauline" has had amid all his years of search for truth one load-star "A need, a trust, a yearning after God." and he cries out impetuously:

"My God, my God, let me once look on Thee
As though naught else existed, we alone."

The soul, in Browning's philosophy, feels the utter desolation of a life without God, or "eternal death" and it learns the deep significance of the words, "This is life eternal to know thee, and Jesus Christ, whom thou hast sent."

The growth of the soul through manifold hindrances and difficulties is the great theme of all Browning's writing. "Life, just the stuff to try the soul's strength on, educe the man." No English poet has felt more deeply than he has the pathos of the battle of life. Yet keenly as he felt it, he did not despair nor bid the world despair. With him inspiration is achievement.

"'Tis not what man does that exalts him
But what man would do."
"Unless above himself he can erect himself,
How poor a thing is man."
"A man's reach should exceed his grasp,
or what's a heaven for?"

Browning is an optimist because he is an idealist. With such an intimate consciousness of the all goodness of God, he does not shrink from placing Him right in the midst of his world where sin, sorrow, wrong, and failure exist. He says in effect what Abraham said, "Shall not the Judge of all the earth do right?"

"God's in his heaven
All's right with the world."
In the healthy mind of Browning,
"This world's no blot—
Nor blank, it means intensely and means good."

God has indeed ordered life beneficently.

"Subsisteth ever
God's care above, and I exult
That God, by God's own ways occult,
May—doth, I will believe—bring back
All wanderers to a single track."

Believing in the soul within man as our true being he exults in the belief in its immortality. If he considers the failing of human power in the presence of death, it is only to exclaim with a sense of triumphant gladness:

"Grow old along with me!
The best is yet to be,
The last of life for which the first was made,
Our times are in His hand,
Who saith: 'A whole I planned,'
Youth shows but half; trust God; see all, nor be afraid."

He has infinite faith in God, whose love will, in ways unkown to us, work out ultimate blessedness to mankind.

"If I stoop
Into a dark, tremendous sea of cloud,
It is but for a time; I press God's lamp
Close to my breast; its splendor, soon or late,
Will pierce the gloom; I shall emerge one day."

To a friend a little before his own death, he wrote,

"Why, amico mio, you know as well as I that death is life, just as our daily, our momentarily-dying body is none the less alive and ever recruiting new forces of existence. Without death, which is our word for change, for growth, there could be no prolongation of that which we call life. For myself, I deny death as an end of anything. Never say of me that I am dead."

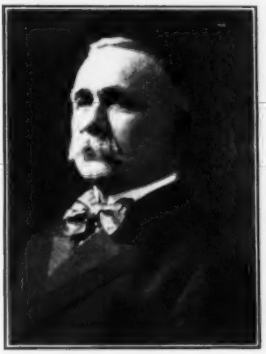
In the last poem that he ever wrote, Browning asserts this sublime confidence even more strongly than did Tennyson in his "Crossing the Bar," or Whittier in his "Eternal Goodness." When reading the proof of this just before his death-illness, he said to his daughter-in-law and sister: "It almost looks like bragging to say this; but it's the simple truth, and as it's true it shall stand."

"One who never turned his back, but marched breast forward;
Never doubted clouds would break;
Never dreamed, though right were worsted, wrong would triumph;
Hold we fall to rise, are baffled to fight better,
Sleep to wake."

"At noonday, in the bustle of man's worktime,
Greet the unseen with a cheer;
Bid him forward, breast and back, as either should be.
Strive and thrive; cry, "Speed, fight on, fare ever
There as here!"
"I go to prove my soul!
I see my way as birds their trackless way.
I shall arrive! what time, what circuit first,
I ask not; but unless God send his hail
Or blinding fireballs, sleet or stifling snow,
He guides me and the bird."
In some time, his good time, I shall arrive:
He guides men and the bird."

CANADIAN POETS

XXV



THOMAS O'HAGAN

"Of the merits of the poems it is only necessary to say that while most of the poetry of our day seems to have buried itself in obscurity, Mr. O'Hagan's poems come freely from the thought and imagination. . . . . and can be understood by any person of intelligence, who is fond of poetry and believes that it springs from the heart. . . . . and the best wishes of all will be that the immortality which we all so ardently crave, may crown his efforts to endow mankind with sweetest and purest sentiments."—Hon. Justice Longley, D.C.L., LL.D., in his Foreword to "In the Heart of the Meadow."

"Tenderness, piety, friendship, filial affection, love that conquers death and lasts beyond the grave, the call of the 'Settlement,' loyalty to the college that has been the poet's Alma Mater: all these we have in Dr. O'Hagan's volume, 'In the Heart of the Meadow,' and not often in recent years have they been more poetically or more gracefully phrased."—P. J. Lennox, Litt.D., Dean of the English Department, Catholic University of America, Washington, D.C.

DR. THOMAS O'HAGAN is a familiar name to-day to many Canadian readers, but I can remember when the first poem which brought this well-known scholar and litterateur any public recognition, appeared in the Toronto Mail. The poem was entitled "A Gate of Flowers," and at the time—June, 1884—Mr. Thomas O'Hagan, B.A., was a member of the teaching staff of the Barrie Collegiate Institute, and I was a Senior Matriculant student in the same school.

In the early 80's, indoor go-as-you-please races for adults, extending over three or four hours in duration, were a special form of athletic activity in Ontario towns, and my memory still retains a vivid picture of this former teacher of

mine, sprinting desperately in a keenly contested finish and winning as a prize a silver cup.

Thomas O'Hagan, the youngest son of John and Bridget (O'Reilly) O'Hagan, natives of County Kerry, Ireland, was born in "the Gore of Toronto," on the 6th of March, 1855, and was a babe in arms, when his parents, three brothers, a sister and himself, moved into the wilderness of the County of Bruce, Ontario. They located in the township of Elderslie, three miles from the village of Paisley. The other settlers were mostly Highland Scotch, and Thomas as a lad learned to speak quite fluently not only the Gaelic tongue of his neighbors, but also the Keltic Irish, which was spoken freely by his parents. He attended the public school of the Settlement where the teachers were Scotch, and where he applied himself with such diligence and ability that he won a Second Class Teacher's Certificate at the early age of sixteen.

Few Canadians have devoted so much time to academic study as Dr. O'Hagan. After graduating from St. Michael's College, a prize winner in Latin and English, he entered the Ottawa University and graduated in 1882, a B.A., with honors in English, Latin, French and German. Three years later the same University conferred upon him the degree of M.A. In 1889, he received the degree of Ph.D. from Syracuse University; and in subsequent years took post-graduate work at Cornell, Berlin, Columbia, Chicago (a Fellow of English Literature, 1901), Louvain, Grenoble and Fribourg Universities. In September, 1914, Laval University, Montreal, presented him with the honorary degree of Litt.D.

Dr. O'Hagan is widely known as a scholarly and popular lecturer on many themes, the following being a few of those most in demand: "Longfellow, the Poet of the Fireside"; "Tennyson, the Artist"; "Browning, the Psychologist"; "The True Story of Evangeline"; "My Trip to Spain"; "The Evolution of the Novel"; "With Dante in Exile"; "Woman in Shakespeare"; "The Study and Interpretation of Literature"; "An Evening with Dickens"; and "The Catholic Element in English Poetry."

Recently (1910-13), Dr. O'Hagan was Chief Editor and Director of the *New World*, Chicago, but is now resident in Toronto, superintending his new publications, and attending to his lecture engagements.

The following is a list of Dr. O'Hagan's books of verse: "A Gate of Flowers" (1887); "In Dreamland and other Poems" (1893); "Songs of the Settlement" (1899; William Briggs); "In the Heart of the Meadow" (1914; William Briggs); Songs of Heroic Days (1916; William Briggs). He has also published several volumes of interesting and instructive essays: "Studies in Poetry"; "Canadian Essays"; "Essays Literary, Critical and Historical"; "Chats by the Fireside"; and a new volume from his pen is now being published by Murphy of Baltimore, entitled "Essays of Catholic Life."

A GATE OF FLOWERS

O Rosebud morn of other years,
How sweet thy golden light!
Far down the path of manhood's vale
Thy sun beams warm and bright:
I turn me to that morn of youth,
And, lingering with the hours,
I feel the breath of childhood's days
Sweep through this gate of flowers.

And entering in, how strange a sight!
The flowers are withered low,
The Rose that blushed at eventide
Is crushed beneath the foe;
The starry eyes that beamed with love—
The lips incarnate red—
Those orphans of the early morn
Are numbered with the dead.

O sweet-lipped Rose, so dear to me,
How oft thy parting smile
Enchained my heart with tender love,
Endeared me with its wile!
How oft has memory clad my thoughts
With hue of purple light,
Caught from the charms that decked thy form,
O Rose of morning light!

How oft I've walked the same old path,
And plucked the floweret wild,
And dreamt a dream of peaceful hope
That lulled me as a child!
How oft in amber light of morn
I've peeped among the trees,
And watched the leaves in sportive joy
Betray the morning breeze!

I love those cheery morns of old,
Their sunshine bright and clear,
Fair nurslings clad in rainbow light,
Embalmed with heav'nly tear;
But ah! the friends of other days—
Those are the gate of flowers
That bloom with tender memories
From buds of golden hours.

E'en now I see the blushing Rose—
Sweet floweret child of grace,—
E'en now I see the Lily droop,
The Fuchsia hide her face;
O tender flowers! O tender years!
O mornings kindly bright!
Within my heart your memory lives
In rays of love and light.

THE SONG MY MOTHER SINGS

O sweet unto my heart is the song my mother sings
As eventide is brooding on its dark and noiseless wings;
Every note is charged with memory—every memory bright with rays
Of the golden hours of promise in the lap of childhood's days;
The orchard blooms anew and each blossom scents the way,
And I feel again the breath of eve among the new-mown hay;
While through the halls of memory in happy notes there rings
All the life-joy of the past in the song my mother sings.

I have listened to the dreamy notes of Chopin and of Liszt,
As they dripp'd and droop'd about my heart and filled my eyes with mist;
I have wept strong tears of pathos 'neath the spell of Verdi's power,
As I heard the tenor voice of grief from out the donjon tower;
And Gounod's oratorios are full of notes sublime
That stir the heart with rapture thro' the sacred pulse of time;
But all the music of the past and the wealth that memory brings
Seem as nothing when I listen to the song my mother sings.

It's a song of love and triumph, it's a song of toil and care;
It is filled with chords of pathos and it's set in notes of prayer;
It is bright with dreams and visions of the days that are to be,
And as strong in faith's devotion as the heart-beat of the sea;
It is linked in mystic measure to sweet voices from above,
And is starr'd with ripest blessing thro' a mother's sacred love;
Oh, sweet and strong and tender are the memories that it brings,
As I list in joy and rapture to the song my mother sings.

RIPENED FRUIT

I know not what my heart hath lost;
I cannot strike the chords of old;
The breath that charmed my morning life
Hath chilled each leaf within the wold.

The swallows twitter in the sky,
But bare the nest within the eaves;
The fledglings of my care are gone,
And left me but the rustling leaves.

And yet, I know my life hath strength,
And firmer hope and sweeter prayer,
For leaves that murmur on the ground
Have now for me a double care.

I see in them the hope of spring,
That erst did plan the autumn day;
I see in them each gift of man
Grow strong in years, then turn to clay.

Not all is lost—the fruit remains
That ripened through the summer's ray;
The nurslings of the nest are gone,
Yet hear we still their warbling lay.

The glory of the summer sky
May change to tints of autumn hue;
But faith that sheds its amber light
Will lend our heaven a tender blue.

O altar of eternal youth!
O faith that beckons from afar,
Give to our lives a blossomed fruit—
Give to our morns an evening star!

AN IDYL OF THE FARM

O there's joy in every sphere of life from cottage unto throne,
But the sweetest smiles of nature beam upon the farm alone;
And in memory I go back to the days of long ago,

When the teamster shouted "Haw, Buck!"
"Gee!" "G'lang!" and "Whoa!"
I see out in the logging-field the heroes of our land,
With their strong and sturdy faces, each with handspike in his hand;
With shoulders strong as Hercules, they feared no giant foe,
As the teamster shouted "Haw, Buck!" "Gee!" "G'lang!" and "Whoa!"

The logging-bees are over, and the woodlands all are cleared,
The face that then was young and fair is silver'd o'er with beard;
The handspike now holds not the place it did long years ago,
When the teamster shouted "Haw, Buck!" "Gee!" "G'lang!" and "Whoa!"

On meadow land and orchard field there rests a glory round,
Sweet as the memory of the dead that haunts some holy ground;
And yet there's wanting to my heart some joy of long ago,
When the teamster shouted "Haw, Buck!" "Gee!" "G'lang!" and "Whoa!"

Demosthenes had silvery tongue, and Cicero knew Greek,
The Gracchi brothers loved old Rome and always helped the weak;
But there's not a Grecian hero, nor Roman high or low,
Whose heart spake braver patriot words than "Gee!" "G'lang!" and "Whoa!"

They wore no coat of armor, the boys in twilight days—
They sang no classic music, but the old "Come all ye" lays;
For armed with axe and handspike, each giant tree their foe,
They rallied to the battle-cry of "Gee!" "G'lang!" and "Whoa!"

And so they smote the forest down, and rolled the logs in heaps,
And brought our country to the front in mighty strides and leaps;
And left upon the altar of each home wherein you go,
Some fragrance of the flowers that bloom through "Gee!" "G'lang!" and "Whoa!"

THE OLD BRINDLE COW

Of all old memories that cluster round my heart,
With their root in my boyhood days,
The quaintest is linked to the old brindle cow
With sly and mysterious ways.
She'd linger round the lot near the old potato patch,
A sentinel by night and by day,
Watching for the hour when all eyes were asleep,
To start on her predatory way.

The old brush fence she would scorn in her course,
With turnips and cabbage just beyond,
And corn that was blooming through the halo of the night—
What a banquet so choice and so fond!
But when the stars of morn were paling in the sky
The old brindle cow would take the cue,
And dressing up her line she'd retreat beyond the fence,
For the old cow knew just what to do.

What breed did you say? Why the very best blood
That could flow in a democratic cow;
No herd-book could tell of the glory in her horns
Or whence came her pedigree or how:
She was Jersey in her milk and Durham in her build,
And Ayrshire when she happened in a row,
But when it came to storming the old "slash" fence
She was simply the old brindle cow.

It seems but a day since I drove her to the gate
To yield up her rich and creamy prize;
For her theft at midnight hour she would yield a double dower,
With peace of conscience lurking in her eyes.
But she's gone—disappear'd with the ripen'd years of time,
Whose memories my heart enthrall e'en now;
And I never hear a bell tinkling thro' the forest dell
But I think of that old brindle cow.

THE DANCE AT McDOUGALL'S

In a little log house near the rim of the forest
With its windows of sunlight, its threshold of stone,
Lived Donald McDougall, the quaintest of Scotchmen,
And Janet his wife, in their shanty, alone:
By day the birds sang them a chorus of welcome,
At night they saw Scotland again in their dreams;
They toiled full of hope 'mid the sunshine of friendship,
Their hearts leaping onward like troutlets in streams,
In the little log home of McDougall's.

At evening the boys and the girls would all gather
To dance and to court 'neath McDougal's rooftree;
They were wild as the tide that rushes up Solway
When lashed by the tempests that sweep the North Sea:
There Malcolm and Flora and Angus and Katie
With laughter-timed paces came tripping along,
And Pat, whose gay heart had been nursed in Old Erin,
Would link each Scotch reel with a good Irish song,
Down at the dance at McDougall's.

For the night was as day at McDougall's log shanty,
The blaze on the hearth shed its halo around,
While the feet that tripp'd lightly the reel "Tullagorum,"
Patter'd each measure with "ooch!" and with bound;
No "Lancers" nor "Jerseys" were danced at McDougall's,
Nor the latest waltz-step found a place on the floor,
But reels and strathspeys and the liveliest hornpipes
Shook the room to its centre from fireplace to door,
In the little log house at McDougall's.

Gone now is the light in McDougall's log shanty,
The blaze on the hearth long has sunk into gloom,
And Donald and Janet who dreamed of "Auld Scotia"
Are dreaming of Heaven in the dust of the tomb.
While the boys and the girls—the "balachs" and "calahs"—
Who toiled during the day and danced through the night,
Live again in bright dreams of Memory's morning
When their hearts beat to music of life, love and light,
Down at the dance at McDougall's.

THE BUGLE CALL

Do you hear the call of our Mother
From over the sea ,from over the sea?
The call to her children in every land;
To her sons on Afric's far-stretched veldt;
To her dark-skinned children on India's shore,
Whose souls are nourished on Aryan lore;
To her sons of the Northland where frosty stars
Glitter and shine like a helmet of Mars;
Do you hear the call of our Mother?

Do you hear the call of our Mother
From over the sea, from over the sea?
The call to Australia's legions strong,
That move with the might and stealth of a wave;
To the men of the camp and men of the field,
Whose courage has taught them never to yield;
To the men whose counsel has saved the State
And thwarted the plans of impending fate;
Do you hear the call of our Mother?

Do you hear the call of our Mother
From over the sea, from over the sea?
To the little cot on the wind-swept hill;
To the lordly hall in the city street;
To her sons who toil in the forest deep
Or bind the sheaves where the reapers reap;
To her children scattered for East and West;
To her sons who joy in her Freedom Blest;
Do you hear the call of our Mother?

I TAKE OFF MY HAT TO ALBERT

Albert, King of Belgium, is the hero of the hour;
He's the greatest king in Europe, he's a royal arch and tower;
He is bigger in the trenches than the Kaiser on his Throne,
And the whole world loves him for the sorrows he has known:
So I take off my hat to Albert.

Defiance was his answer to the Teuton at his gate,
Then he buckled on his armor and pledged his soul to fate;
He stood between his people and the biggest Essen gun,
For he feared not shot nor shrapnel as his little army won:
So I take off my hat to Albert.

King of Belgium, Duke of Brabant, Count of Flanders, all in one;
Little Kingdom of the Belgae, starred with honor in the sun!
You have won a place in history, of your deeds the world will sing,
But the glory of your nation is your dust-stained fearless King:
So I take off my hat to Albert.

THE CHRISM OF KINGS

In the morn of the world, at the daybreak of time,
When Kingdoms were few and Empires unknown,
God searched for a Ruler to sceptre to land,
And gather the harvest from the seed He had sown.
He found a young Shepherd boy watching his flock
Where the mountains looked down on deep meadows of green;
He hailed the young Shepherd boy king of the land
And anointed his brow with a Chrism unseen.

He placed in his frail hands the sceptre of power,
And taught his young heart all the wisdom of love;
He gave him the vision of prophet and priest,
And dowered him with counsel and light from above.
But alas! came a day when the Shepherd forgot
And heaped on his realm all the woes that war brings,
And bartering his purple for the greed of his heart
He lost both the sceptre and Chrism of King.

Art and Artists in Canada

By KATHERINE HALE

To write of art and artists in Canada one must sometimes glance backward if only to get perspective for the present.

Sometimes amid the voices of to-day I like to think of one who was justly called "the Nightingale of Canada," and whose golden voice loved long ago is still heard in memory by thousands of admirers when the name of Mrs. Caldwell is mentioned.

MRS. CALDWELL

A CANADIAN NIGHTINGALE

I CAN remember, from a nursery window, all the life and stir of the market square of a little picturesque Ontario town. There loomed up the massive stone Town Hall, home of a dozen industries from meat markets in the basement through civil offices on the second floor to a higher and sacred temple of art endowed with a stage and dressing rooms and hundreds of wooden benches.

To watch the lights appear at evening in this abode of the gods and the audience begin to assemble for concerts was one of the real excitements of childhood. All those little black and white people trooping up the steps to hear and see one or more of the fabled ones whose names had been on the bill boards and in the local papers for days was truly an "occasion."

The wizard violinist Remenyi, who sometimes came and set the town agog; the Littlehales family from Hamilton, with their trios and quartettes, George Fox, that divinely gifted "child wonder;" Nora Clench, Miss Agnes Knox, with her thrilling impersonations of Lady Macbeth, and other unfortunate and in her hands acutely articulate persons; Pauline Johnson, with a wealth of savage romance surrounding her swarthy young person; J. W. Bengough, who was known to caricature any one at a moment's notice, and who did not hesitate to build upon the nose of the principal of the High School in a playful moment, and a little later on Harold Jarvis, handsome as an Adonis, with a voice that matched his beauty, and the magnetic and immensely human Jessie Alexander, these were only a few of the shining visitants who trailed their robes of glory through the dull aisles of hundreds of little Canadian towns, the messengers of art from "Afar."

Thousands of Canadians will thrill a little at the names and will recall the past with a strange glow, as a portly man of business did the other day when I mentioned the subject of this article; now almost vanished from the public eye.

"Mrs. Caldwell—Ah, what a singer! I can remember when we thought nothing of paying her a hundred dollars to come to Galt, or Peterboro', or Woodstock, or Ottawa, or wherever the place might be."

Yes, there was one name more magical than the rest—a sort of golden bird-of-song.

To illustrate Mrs. Caldwell, and this again must be typical of the experience of hundreds who have heard her, one's feeling after listening to Patti for the first and only time was "Why, that is Mrs. Caldwell's voice." The same bird-like quality, the ease, the care-free, ecstatic, far-away warble, a song that seems almost made of light and air. Technically if you will have it so, the type of throat made in the mould of which there are only a few in existence; the Patti, Sembrich, and Melba mould made especially, it would seem, to produce those airy notes.

Twenty-five years ago, when this singer was in her youthful prime, Canadians in country places were very far away from the centres of literature or song. Towns that now possess every inducement to cosmopolitan artists were then bereft of all but the semi-annual "good concert" held in the Town Hall. The coming of Mrs. Caldwell was always an event. She was beautiful, she was elegant in her dress and manner, she bore with her an air of the great world, and her trills and vocal furbelows were the wonder of the day.

Jessie Alexander, who in her debut days used to be associated with the singer on the same programmes, has told me how, to her young eyes, Mrs. Caldwell carried with her all the glamour of the great. The very way she arranged her train before going out on the stage, her charm of movement, the gracious way of accepting applause and flowers, even the temperamental "nervousness," the whole prima-donna equipment, was a revelation to the young aspirant.

"She was like a being from another world," said Miss Alexander. And she went on to tell me of some such assertion which she herself made in those days to a famous American Impressario regarding the Canadian singer, and the Impressario's polite but impressive shrug, "There are few really great voices in the world," he said, "and the perfect sopranos you may count on the fingers of one hand." Sometime later a meeting was arranged between Mrs. Caldwell and the sceptic After the first song he sprang to his feet and virtually offered her New York. "You are one of the elect," he said; "yours is a world-voice. What are you doing in Canada?"

At another time during a reception in Hamilton, given to Madame Mojeska, the famous actress was tired out, listless, and uninterested. Mrs. Caldwell was announced to sing. There was a prelude and then the notes of that golden voice.

"Mon Dieu!" exclaimed the revived Mojeska. "Is it a bird or a woman?"

Afterwards she sent her photograph to the hostess bearing this inscription—the well-known words of Juliet to Romeo: "Stay but a little, I will come again to hear your nightingale."

Mrs. Caldwell used to sing those lovely old-fashioned songs that can only be interpreted by a perfect voice with any success: "The Magic Flute," "The Carnival of Venice," a Swiss "Echo Song," and above all "The Rainy Day," for which she was famous. As a child I can remember the desolation, the passion, the sense of the cloudy mood that haunted her voice in that song.

We have many talented singers before the public to-day, but there is no Canadian nightingale—not even Edvina—who can compare with this rare voice out of the not so far distant past.

A woman of the world in every sense is Madam Katherine Goodson (Mrs. Arthur Hinton) who has played in practically every musical centre in Europe, in Australia and the United States, and who appeared in Toronto for the first time on March 2nd at Massey Hall. The combination of her work and personality is really most fascinating. To that feminine quality which is always endearing she adds such a big sweep of power that she may truly be called an "orchestral pianist," and her repertoire is so varied that she is obliged to use every shade of emotion in rendering works so dramatically opposite as those of Beethoven, Debussy, Ravel, Macdowell, Liszt and Brahms. Her Chopin group was particularly fine. Indeed, Katherine Goodson has much to say to the student as well as the concert-goer, and among other things she says very plainly through her playing "please observe that my ground work is secure, that I can safely rest on my technique; that I do not expect emotion to carry me over hard places or mere beauty to take the place of nobility and purpose."

Madam Goodson is a native of Hertfordshire, England. She became a pupil of Oscar Peringer and later of Lechetiszky at Vienna, and the list of her appearances and triumphs in Austria, Germany and France during the ten years prior to the war is a lengthy one. She is an especial favorite with the great conductor, Arthur Nikisch, under whose baton she has played many famous concertos and he has written of her: "I have known many musicians in my life, many soloists, but the true artists I can count on my fingers—Ysaye, Paderewski, d'Albert—and to these names I now add yours, Miss Goodson."

Amongst the most interesting of the musicians who visited Toronto in March were Mrs. Kennedy-Fraser and her daughter, who gave a unique recital of ancient Scottish folk song collected mainly in the Hebrides, those far-off Western Isles of which but few of us know anything save their mere existence on the map.

Mrs. Fraser, who has a passion for tracing the sources of song, has discovered Gaelic folk lore and Gaelic chants that are extremely interesting, and, as she interprets them in concertised form, decidedly Wagnerian in places. Indeed, Mrs. Fraser has come to the belief that Wagner got much of his inspiration out of the North Sea. She emphasizes the fact that Celtic races whose songs of love and of labor are so apparently simple are really the outcome of as complex emotion as that which makes the tonality of Debussy so interesting to musicians to-day. Indeed, in the ascent of what she calls "the spiral stairway of music," she finds these legendary songs at the base, the more elaborate and conventional works, when the musical scale as we know it now had emerged from the pentatonic to the seven scale, making a curve which was to lead up the spiral again to the "basic" point. Some of the songs sung by Mrs. and Miss Kennedy-Fraser are particularly beautiful, especially the "Wild Swan Song," a theme out of which one believes came the motif for Lohengrin, and later on for the introduction of Parsifal. These interesting ladies have collected Gaelic music wherever they have heard the rumor go forth that it might be found, and have published more than one volume of songs.

Mrs. Kennedy-Fraser found Scotland very doubtful of the authenticity of the songs, when she first brought them back from the western isles .so she took a phonograph on her next visit, the childlike folk, cut off from civilization, being greatly delighted when their own voice came back to them, the record of an accidental cough, especially catching their fancy.

Some of Mrs. Fraser's interpretations were given to the harping of her daughter, who picked at the strings with the touch of a Celtic minstrel. Among the numbers were "St. Bride's Cleansing Crown," the ancient lull song, which tells how Christ's lullaby came to the isles, and "Kishmul's Galley"; also a "milking croon" and "churning lilt," both sung in Gaelic, and a Spinning Song, were characteristic of the labor lilts.

What made the recital of such special value was the great sincerity of the singers and their essential Celtic quality. They are Scotch with more than a touch of the Highlands; Scotch as the color of the heather. Scotch as the cry of the sea beating against granite walls. The call of the sea is in their voices and the tender croon of it on their lips.

An hour with such lovers and interpreters of the real meaning of song is worth dozens of conventional concerts and recitals planned for the deification of the singer's voice. In such work as this literature, tradition, and art are allied in an irresistible combination.

AT THE last concert of the series given this season by the String Quartette of Toronto in the Conservatory of Music Hall, on March 22nd, one was struck anew by the exquisite grace of the ensemble of these musicians who have played together for so long that their work has the smoothness and finish of perfect accomplishment. Always good programme builders the Quartette gave, in this particular concert, an unusually wide range of subject matter, although there were but three numbers. Beethoven's Quintette in C Major op. 29, in which Mr. Sydney B. Wright played second viola, presented that emotional, yet reserved and intensely human appeal in which the great master never fails, and against it was placed the ultra-modernist, Debussy, in his one string quartette (G Minor op. 10) containing three movements, all of them imbued with the composer's "other-worldness," and beautiful coloring: an effect which carries one far away on small gossamer wings to the lands of sprite and pixie. To end we had Dvorak, in a quartette for piano and strings, which was splendidly described in a note written by the well-known cellist of the Quartette, Mr. Leo Smith. In this number the piano work was cleverly done by Madeline O'Brian Mills, and the whole effect was beautiful.

Indeed, in listening to this Quartette, so thoroughly representative of the best in chamber music, the wonder grew that other cities and towns in Ontario at least, if not all over Canada, do not make a definite effort to hear such an organization at least once in a season for of such is the real kingdom of music.

A Joint Recital of song and piano will be given in the Conservatory Music Hall on the evening of March 29th by Miss Marjory and Miss Olive Brush for the benefit of the Woman's Auxiliary of the 97th American Legion. The work of these young artists, though well known in Toronto, will be presented for the first time in Joint Recital, and the affair promises to be a real treat for music lovers.

Is it a strange thing to call Mrs. Pankhurst a lady of dreams? That is what she is to me. A woman who has been led on by the force of ideals. A woman who has always visualized the invisible. Her recruiting speeches are no less wonderful than were her appeals to men and women for equal suffrage. From the heart of a great audience she appears to one a young woman, so silver and spring-like is her vibrant voice. Near at hand she becomes a woman of many sorrows, whose face has been seamed by the impress of hardship and privation. But her strength, her force, her faith in "the unseen" is like sunshine. She is so thin and pale and fragile. So entirely a woman—so much a flame.

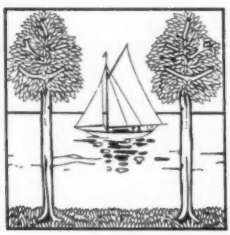
THE TEACHING OF HOUSEWIFERY

We hear a great deal of talk nowadays about the importance of economy in domestic expenditure, but while employment is abundant and wages are high, the working classes show no signs of practising thrift. In the same way, although thoughtful persons realize the value of infant lives as a national asset at a time when we are losing the flower of our manhood, babies are still held very cheap in the mean streets of our industrial centres. How little importance the working classes attach to a knowledge of housewifery and the care of infants has been demonstrated by Dr. T. O. Halliwell, M. O. H., in an account he has published of the Dewsbury Home-making School, which was started in 1909, the first of its kind in the West Riding. The school is intended to provide girls over 13 years of age who have completed their ordinary school course at the elementary day school with a practical training in household duties. The main object of this course of training is to equip the girls as far as possible for the life they will lead in their own homes, to teach them economy-thrift, and right methods in practical household management, and to encourage them to think, plan, and execute on their own initiative, to increase their interest in domestic matters, and to widen their mental horizon. The school is equipped and furnished as an ordinary home, and all the details of household work are taught in a systematic and practical manner, the girls being required to carry out the whole of their work under the direct supervision of trained mistresses. In the cookery class, the girls prepare the dinner which is provided every day for teachers and scholars. They are taught how to select, and purchase the materials, how to lay the table, and how to clean and wash up. Housewifery is taught and practised daily in the furnished residence attached to the school; and, in addition to the ordinary care and cleaning of the house and furniture, the girls are taught the principles of ventilation, warming and lighting, and the conditions necessary to good health. The course of training includes instruction in cookery, laundry work, needlework, household management, marketing, hygiene, sick nursing, care of infants, upholstery, mending and renovation of garments, and in reading from good standard books.

In spite of the fact that scholarships, free tram tickets and other inducements are offered—all that the scholars are required to pay is 6d. per week, for which they receive five really good dinners—it seems deplorable that the full complement of scholars, viz., 30, cannot be secured. Dr. Halliwell states that it is not for want of advertising the school that there is not a full muster of scholars. Illustrated pamphlets are distributed to every elementary school, and girl leavers are seen and interviewed whenever possible. There are several reasons which work against the success of the scheme. Firstly, parents are unwilling to lose six months' or twelve months' money which might be earned by their children by working in the mills or elsewhere; secondly, the girls themselves are envious at the thought of their companions having a fair amount of pocket-money, while they get very little; thirdly, many parents say that they can teach their girls themselves; fourthly, the parents say the girls will only forget what they have learnt when they enter the mills later. This last argument is absurd, because the same remark might equally be well applied to ordinary day-school education, and the principles taught at the home-making school can be applied every day of a girl's life, in making garments, shopping, housekeeping, and cookery. The school is splendidly equipped and very well managed, and draws pupils from a very large area numbering some 100,000 inhabitants.

We agree with Dr. Halliwell that it reflects no credit on parents that the opportunities for instilling the doctrines of cleanliness and home management are so neglected, and, for this reason alone, that other means should be taken to fill the

school. At the present time no doubt there is some excuse for working class parents curtailing the education of their children, but even before the war they were not taking advantage of this school. Some improvement in attendance should result from a concession obtained from the Board of Education at the end of 1914. Girls who are going to attend the home-making school may leave the elementary school at 12 years and 9 months; thus, if they are taking a six months' course they only lose a three months' wage-earning period. Dr. Halliwell suggests other ways of tackling the difficulty. First, the last six months of a girl's school life could be spent at the home-making school, or alternatively, the age of leaving for girls could be raised from 13 years to 14, and the last 12 months spent at the home-making school. It must be remembered that those girls who really need the training are those who come from dirty and untidy homes. This type of girl is never seen at the home-making school, and it seems that the only way to secure attendance is by compulsion.—The Medical Officer.



PUBLIC WELFARE

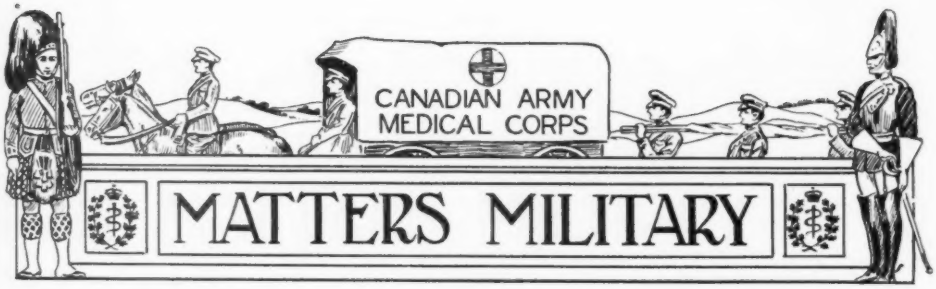
PERSONALITY

We all have met some extraordinary friend whose strong and intense personality made our hearts happy with his vital and glowing presence. He was contagiously glad, a brilliant gem of full-rayed humanity in whose glory we forgot the sun, and whose absence would have darkened day had it not left in its wake a train of brightest memories, an aftergleam that became an evergleam, a rose-hued reflection of the golden hours we had spent in his presence. Ever after, we heard the great, sweet bell-tones of the music of his words echoing in the soul. It was a song of peace and purity, of joy and light, ringing down the archways of the years.

A great friend is always memorable. What significance attaches to the least association with such a friend. In our esteem, he is a hero, a conqueror. Our love crowns him king. Incomes do not count for or against such a relationship. He solves impossible problems and turns despair into hope by some mysterious process of sheer personality. Like a vast rock-shelter he stands in the track of the storm and its violence dwindles to a zephyred breeze. Obstacles fall down and disappear before him. Vision grows large and comprehensive. We see in terms of eternal value. We become spontaneous and prolific. A wild, sweet joy throbs in us and thrills us, and we walk in a city of light.

The highest personality is no Cæsar or superman despising those less brilliant or less gifted than himself. He is a St. Francis. His function is not to absorb but to radiate. He is a lover of all things and all men. He is a mirror in which all see themselves lustrous. He is not exclusive or possessive. Jealousy is not in him for jealousy is self-love that overtops our sympathies. He is pure gold.

Such a presence gives life to a love, in the spell of whose music the choirs of the old heaven lapse into a discreet silence. The strong, pure personality is vital and dynamic. We identify the sunglow of such a presence in some way with the all-sustaining universal Forces. It seems to be all that can be embodied of the omnipresent Joy. He who feels it becomes a mirror in which others see themselves at their best. Wherever his presence goes, the glory of humanity is seen and the common people are no longer commonplace. —Albert D. Watson.



MATTERS MILITARY

EUROPEAN PRISON CAMPS*

By DR. BERT. W. CALDWELL, American Red Cross.

PROBABLY the only emergency that was not carefully thought out and every detail of preparation arranged for, by the General Staffs of the belligerent countries, was the care and treatment of the prisoners of war. The unexpectedly large numbers which fell into the hands of some of these Governments found the plans which they had made for handling this problem entirely inadequate, and elaborate systems for the housing, feeding, employment and guarding of their prisoners had to be hurriedly established.

Germany, with her population of seventy millions, found herself called upon to care and provide for two and one-half millions of prisoners within fourteen months after the declaration of war. Russia during the same period had taken one million six hundred thousand prisoners. Little Serbia had seventy thousand prisoners, equal to one-fourth of her standing army; while the other warring countries had taken large numbers.

This increase in the population of each country was an idle one, not productive in any sense, except for a small portion of those prisoners who are engaged in agriculture, or working in the mines or factories adjacent to the prison camps. It represented a hostile foe within the country which had taken them prisoners, and a great majority of them were half-starved, exhausted physically and discouraged mentally. Large numbers were sick and wounded, practically all were vermin infested, and many were taken from localities where contagion and infection were rife. To protect their own soldiers and civil population as well as the prisoners from disease, each country had to institute a rigid system of quarantine and sanitation, and to apply it consistently. In those countries where such systems were instituted, such as in Germany, and England, France, Austria, and Italy, disease was easily controlled and the mortality from these causes was reduced to a minimum. In those countries where these measures were not enforced, and where sanitation and quarantine were practically neglected, as in Russia and Serbia, epidemics occurred, resulting in the loss of thousands, not only of prisoners, but of native soldiers and civil population as well.

Prisoners are of two classes—the civilian class, which is composed of civilians who were in the enemy countries at the beginning of hostilities, and the second class consisting of soldiers taken prisoners in the different campaigns. The civilian class, comprising men, women and children, were immediately detained at the beginning of the war, and were placed in camps arranged especially for them; although in almost every camp in Germany which has prisoners of war there is a scattering of civilian prisoners to care for as well.

The great majority, practically all of the civil prisoners in Germany, are detained at the Ruhlebem camp near Berlin. This prison camp was constructed especially for them and paid for out of the private fortunes of the Imperial Family. It is especially well located and is constructed with every convenience

*Reprinted from the Military Surgeon, March, 1916.

and safeguard of sanitation. The prisoners of each nationality have buildings assigned to them separately. Playgrounds have been established, theatres and schools instituted, and every provision made for the feeding and for the cleanliness of the camp. The prisoners here detained are arranged into groups of each nationality, and some member of each group is placed as administrative head of that particular group. The only complaint encountered at the Ruhlebem camp was made by some English lads who had over them an Australian sea captain, and they complained and demanded a change of authority because the captain flogged them when they took too many liberties. The administration of this camp is humane and just, and the health and comfort of the prisoners here detained is the first care of the prison authorities. The Kaiser is personally interested in Ruhlebem, and members of the Imperial Family visit it frequently.

The second class, and by far the larger class, is composed of soldier prisoners. Prison camps are located and constructed with these considerations in view in their order: Sanitation (including water supply), guarding, feeding, housing, transportation, and proximity to possible employment of prisoners outside of the prison camp. Another consideration to which great importance is attached, and which is never neglected by the German authorities, is the institution of playgrounds, the establishment of schools and places and forms of amusement inside of the prison camps. The most discouraging feature which the prison authorities have to contend with is the inactivity and consequent ennui which is incident to prison life following the excitement and activity of campaigning. This condition among the prisoners causes the authorities much anxiety, and no measure is neglected that will assist in relieving it. The prisoners are permitted to work in the fields near the camp, or in mines or factories, or on the roads, for which labor they receive a small remuneration, and nine out of ten prisoners welcome with an unconcealed joy any opportunity to do such work as a relief from the confinement and inactivity of the prison camp.

In establishing a prison camp, a site is selected convenient to transportation routes, easily susceptible to the institution of adequate sanitation, near an abundant and potable water supply, and free of trees. Different areas of ground are utilized, varying, of course, with the number of prisoners which it is intended that the camp shall accommodate. Usually 20 acres of ground is allotted for each five thousand prisoners for prison camp purposes, although in many instances this proportion of ground is smaller. After selecting the ground two barbed wire fences are constructed entirely around the site, about 12 feet in height, with the strands of barbed wire about 9 inches apart. These two fences are located one within the other and are separated from each other by about 12 feet. Between these two fences a smaller barbed wire fence is constructed about 4½ feet in height, with the barbed wire strands running close enough so as to prevent the prisoners from climbing through them, and this smaller fence is constantly charged with a current of high voltage electricity—this to discourage possible attempts upon the part of the prisoners to leave the grounds. At each corner outside the inclosure a mound is built sufficiently high to command the camp, and on top of this mound a rapid-firing gun is placed; while at convenient intervals around and through the camp inclosure guard-posts have been established to assist in guarding the prison camp.

At the same time that this wire fencing is under construction sanitary installation of water pipes and sewer system is at once instituted, and the latrine system is installed. The water supply is generally taken from the same supply which feeds the nearby city or town, and where such supply is not available it is obtained through a system of driven wells. The water supply is frequently examined in the government laboratories and is quickly condemned upon the appearance of anything that would threaten the health of the prisoners in camp. The latrine system is the open cement basin system,

located usually at the rear or near one corner of the camp compound. This is covered by seats which are made fly-proof, and the contents generously and frequently treated with deodorants and disinfectants. The basins are emptied frequently and the contents used to fertilize the adjacent fields.

After the installation of the sewer system and water supply, a kitchen laundry and bath-house are constructed, and around these establishments the prison camp itself is built. The kitchen is connected with the commissary and is usually under the same roof. The laundry and bath-house are under the same roof, and are equipped with a large disinfecting plant, either a steaming room or autoclave. Both laundry and bath-house are supplied with an abundance of hot and cold water.

The camps are built following one of two plans. The older plan, which has since been abandoned, consisted of building the prison barracks around a square, in the centre of which were located a kitchen, laundry and bath-house, and at one corner the latrine. The area comprised in each square was approximately three acres, and the barracks were built to accommodate between 2,500 and 3,000 prisoners to each compound. The buildings were of wooden construction, built with a slanting roof about 14 feet in height on the inside of the square, and sloping to about 9 feet in height on the outside. The barracks were about 50 feet wide, of an average height of 10½ feet, and divided into rooms of different sizes, usually 60 feet in length and 120 feet in length. These barracks were illy suited to the purposes for which they were built, because there were no openings for light or ventilation on the outside of the rooms, and the only ventilation or light that was possible came from the inside of the square and occasionally from dormer windows constructed in the roof. The result was that all the barracks constructed after this plan were poorly ventilated, poorly lighted and over-crowded. The smaller rooms accommodated about 80 to 100 prisoners and the larger rooms from 160 to 200 prisoners, giving a cubical content and space allotment for each prisoner entirely insufficient for the purposes of health or comfort. This small space was further diminished by the bedding and the dunnage which each prisoner was permitted to bring into camp with him. The newer and the better plan which is now followed in the German prison camps consists of building the barracks on either side of streets running through the camp. These buildings are of a type that is uniform in dimension and construction. They are about 14 meters wide by 60 meters long, their roofs sloping either way from a centre ridge, and about 4½ meters in height. These barracks are inclosed in a high barbed wire fence in a separate compound, with separate water supply and separate latrine in the rear of the compound and a garbage pit in each compound for the use of the barracks. Each barrack is separated from its neighbor by an intervening space of 80 feet. Each barrack is raised on pillars above the ground about 2 feet. These barracks are generally ceiled. They accommodate, when full, 180 to 200 prisoners, including quarters for petty officers, which are partitioned off in the centre of the barracks, and these partitioned rooms accommodate from four to six petty officers. Each barrack is occupied by prisoners of the same nationality. This is made necessary because of the fact that the English insist upon an abundant and free circulation of air, the French do not care for so much and the Russian prisoners do not want any at all. Then the personal habits of each nationality of prisoners are not acceptable to those of other nationalities, and to avoid constant conflict among the prisoners the prison authorites house the prisoners of each nationality in separate barracks. This new type of prison barrack permits of sufficient lighting and ventilation by the construction of doors and windows in the ends and sides of the building as well as apertures through the roof.

When the prisoners are taken on any front, they are moved back a short distance from the front. If possible, the sick and wounded are segregated and sent to the hospital, and the well detained until they are free from ver-

min and then are moved on to the prison camps. Upon their arrival at the prison camp they are detained in isolation barracks, which are especially reserved for the reception of incoming prisoners, for a period of fourteen days. In this camp their hair is cut and they are sent to the bath-house and laundry and disinfecting plant every fourth day. They receive a warm water, soap and kerosene bath, their clothes are placed in the steaming-room and subjected to steam at a temperature of 135 degrees Celsius for a period of 30 minutes. Their surplus clothing and bedding is boiled and washed in the laundry. At the end of fourteen days the prisoners are mustered, carefully examined for vermin and if they are free from insects are sent to the permanent barracks inside the camps. On his admission into the camp the prisoner receives two blankets and a pallet filled with excelsior, which the Germans have found better suited for bedding purposes than straw. He is equipped with two suits of underclothes, two shirts, two pairs of socks, an overcoat, an outer suit and cap and a pair of boots. If the clothing he wears when he comes to the camp is sufficiently good he retains it. In the event that it is not sufficiently good he receives new clothing from the prison authorities.

The kitchens attached to each camp are well constructed, well equipped, and in excellent condition of cleanliness. The food furnished the prisoners is not of great variety, and seems to me to be insufficient in quantity. It is largely vegetable in character, consisting of potatoes, carrots, cabbage, turnips, of beans, peas, lentils, and other dehydrated vegetables, of meals made from corn, soy beans and peas, of dried fruits, salt fish, and small rations of meat. Coffee is also included. An allowance for each prisoner of 300 grams of bread per day in addition to the regular ration is issued. The unprepared food is of very good quality; nothing is found upon examination that is deleterious in any way.

TRANSLATION FROM ORIGINAL MENU OF THE PRISONERS' KITCHEN AT CAMP MUNSTER II FOR THE PERIOD OF NOVEMBER 21 TO 27, 1915.

Day	Breakfast		Dinner		Supper + { Daily bread, 300g. }	
Sunday	Coffee, Coffee substitute (Zusatz), Sugar,	5g. 3g. 30g.	Potatoes, Cabbage, Cassel spare ribs, Lard,	600g. 500g. 100g. 5g.	Potatoes, Cheese,	400g. 80g.
Monday	Corn mush, Evaporated milk, Sugar,	100g. 10g. 10g.	Beans, Potatoes, Lard,	200g. 600g. 10g.	Potatoes, Swedish turnips, Lard,	400g. 400g. 5g.
Tuesday	Coffee as on Sunday		Carrots, Potatoes, Beef,	500g. 600g. 120g.	Potatoes, Chestnut, Sugar,	400g. 150g. 10g.
Wednesday	Barley, Meal of rolled Potatoes, Lard,	50g. 50g. 5g.	Swedish turnips, Potatoes, Corned beef, Lard,	500g. 500g. 100g. 5g.	Potatoes, Sausage, Sauerkraut,	400g. 100g. 300g.
Thursday	Coffee as on Sunday		Codfish, Cabbage, Potatoes, Potato meal, Oleomargarine, Onions, Spices as needed	200g. 400g. 600g. 10g. 10g. 10g.	Potatoes, Carrots,	400g. 500g.
Friday	Rolled potato meal, Evaporated milk,	100g. 10g.	Flour, soy bean Potatoes, Onions, Lard,	120g. 600g. 10g. 10g.	Potato salad and potatoes, Oil of soy bean, Vinegar according to need One herring	500g. 500g.
Saturday	Coffee as on Sunday		Dried peas, Potatoes, Bacon,	150g. 600g. 30g.	Potatoes, Dried vegetable, Lard,	400g. 30g. 5g.

Signed by Drs. Bispinck, E. Steinecke, Winckler.

It became necessary to prepare the ration in such a manner as would obviate the necessity of the prisoners using knives and forks and other eating utensils. The Germans solved this problem by cooking all of the different articles of the ration together in large cookers, and issuing to each prisoner this prepared food in bowls, to be eaten with spoons. The kitchens are all equipped with large cylindrical cookers which are heated with coal, and the food is cooked until it is soft and in a condition to be eaten with a spoon. It is seasoned well and is fairly palatable, but does not afford the variety in preparation or ingredients, nor is the quantity sufficient to afford a well-balanced diet. The prisoners are permitted to receive from home articles of food, which are sent from friends and organizations of their respective countries. The food thus received supplements the diet furnished by the prison authorities. In fact, the English prisoners insist that were it not for the food that they receive from home, they would not be able to live upon the prison food. On the other hand the Russians receive very little food from home, and yet as a rule the Russian prisoners present a very good appearance of health.

MENU OF THE PRISONERS' KITCHEN AT CAMP MUNSTER III FROM NOVEMBER 21 TO 27, 1915.
(Translated from the original)

Date—Day	Breakfast	Dinner	Supper + { Daily bread, 300g.
21, Sunday	Soup of potato starch, 15g. Evaporated milk, 17g. Sugar, 30g. Toast, 25g. Marmalade, 50g.	Cabbage 400g. Potatoes, 700g. Fats, 20g.	Buckwheat 50g. Potato starch 25g. Potatoes, 600g. Meat sausage, 100g.
22, Monday	Coffee, 4g. Coffee substitute (Zusatz), 6g. Sugar, 30g.	Swedish turnips, 300g. Potatoes, 700g. Beef, 120g.	Flour for soup, 50g. (perhaps potato) Potatoes, 600g.
23, Tuesday	Soup flour of dried beef, 50g. Rolled potatoes (a mealy product), 25g.	Turnip leaves, 400g. Potatoes, 700g. Evaporated milk, 2½g. Lard, 20g.	Potatoes in jackets and others, 700g. Mackerel, salt, 150g.
24, Wednesday	Coffee, 4g Coffee substitute (Zusatz), 6g. Sugar, 30g.	Cabbage, 400g. Potatoes, 700g. Sausages, 90g.	Knorr's soup, 40g. Meal of rolled potatoes, 25g. Potatoes, 600g.
25, Thursday	Soup of soy flour, 15g. Dried milk, 17g. Sugar, 30g.	Turnip leaves, 400g. Potatoes, 700g. Evaporated milk 2½g. Lard, 20g.	Potatoes in jackets and others, 700g. Smoked herring, 250g.
26, Friday	Coffee, 4g. Coffee substitute (Zusatz), 6g. Sugar, 70g.	Codfish, 150g. Potatoes, 800g.	Flour for soup, 50g. Meal of rolled potatoes, 25g. Potatoes, 600g.
27, Saturday	Coffee, 4g. Coffee substitute (Zusatz), 6g. Sugar, 30g.	Cabbage, 400g. Potatoes, 700g. Beef, 120g.	Knorr's soup, 40g. Meal of rolled potatoes, 25g. Potatoes, 600g.

Signed by v. Pulkammer, Major-General; Miffer Major Army Med. Corps; Mickler, Sergeant-Lieutenant

The feeding problem presents many difficulties, one of which I came in contact with in the camp at Altdam. Among the Russian prisoners taken in this camp are two orthodox Jews. Their religion forbade them partaking of the diet furnished by the Russians or by the prison authorities, and they consistently followed the dictates of their religion with the result that they became emaciated and seriously anemic. The prison authorities were some days in discovering what the trouble was, but finally succeeded, and they at once provided these two prisoners with spirit lamps to prepare their own food with and a diet which is in accordance with their religion. The result was that both these prisoners were improving in health and appearance daily, and were in a condition to be discharged from the hospital when they were seen.

MENU OF THE PRISONERS' KITCHEN AT CAMP ALTDAMM FOR THE PERIOD OF NOVEMBER 21 TO 27, 1915.
(Translated from the original.)

Date—Day	Breakfast		Dinner		Supper		Daily Bread allownace
21, Sunday	Soy bean flour, Tapioca flour Lard,	30g. 60g. 10g.	Fresh meat, Cabbage, Barley, Potatoes,	120g. 500g. 20g. 750g.	Corn meal, Marmalade,	75g. 50g.	300g.
22, Monday	Coffee, Coffee substitute (Malz kaffe), Sugar,	2g. 3g. 30g.	Soy bean flour, Turnip root cabbage, Lard, Potatoes,	100g. 300g. 10g. 750g.	Corn meal, Cheese, Additional bread,	45g. 100g. 200g.	300g.
23, Tuesday	Soy bean flour, Tapioca, Lard,	30g. 60g. 10g.	Salt meat, Cabbage, Barley, Potatoes,	120g. 500g. 20g. 750g.	Corn meal, Marmalade, Coffee, Coffee substitute (Malz kaffe), Sugar,	75g. 50g. 2g. 3g. 15g.	300g.
24, Wednesday	Coffee, Coffee substitute (Malz kaffe), Sugar,	2g. 3g. 30g.	Bloodsausage, Common (horse) beans, Lard, Potatoes,	100g. 130g. 10g. 750g.	Cheese, Corn meal, Potatoes,	100g. 45g. 650g.	300g.
25, Thursday	Corn meal, Sugar,	75g. 30g.	Cod fish, Fish roe, Turnip root cabbage, Potatoes,	100g. 100g. 200g. 750g.	Barley, Soy flour, Lard, Potatoes,	30g. 30g. 10g. 400g.	300g.
26, Friday	Corn meal, Common beans, Lard,	20g. 70g. 10g.	Freah meat, Cabbage, Barley, Potatoes,	120g. 500g. 200g. 750g.	Cheese, Tapioca, Lard, Potatoes, Coffee, Coffee substitute Sugar,	100g. 20g. 5g. 650g. 2g. 3g. 15g.	300g.
27, Saturday	Coffee, Coffee substitute (Malz kaffe), Sugar,	2g. 3g. 30g.	Salt meat, Soy beans, Potatoes,	120g. 150g. 750g.	Herring, Corn meal, Lard, Potatoes,	125g. 30g. 5g. 750g.	300g

In almost all the camps the prisoners were overcrowded. Measures looking to the remedying of this condition were being instituted, and as fast as possible new barracks were being built and new camps located to accommodate the prisoners. The sewage is disposed of by septic tank system, which seems to meet all the purposes which the situation demands. The garbage is collected in large receptacles located at convenient points in the camp compounds, and such of it as cannot be utilized for the feeding of hogs and other animals is disposed of by burning. The receptacles in every case are fly-proof, and great care is taken to prevent the breeding of flies, either in these receptacles or in any other part within or adjacent to the camp.

Connected with the prison camp is a well-equipped and well-regulated hospital, under the supervision of a medical officer of the German Army Medical Corps, and assisted by a staff collected from the medical officers of the different nationalities of prisoners. The hospital is sufficiently large to care for the sick of the prison camp. The surgical work of the camp is generally done in these hospitals. Attached to the hospital is an isolation ward for the quarantining of contagious diseases. The hospital corps men among the prisoners are utilized in the personnel of the camp hospital. The medical officers who are detailed from among the prisoners for work in hospitals are treated with consideration and respect, are housed and fed as become their rank and have all the privileges which officer prisoners of war would have.

The disease which is most frequently encountered, and one which presents the greatest difficulties of control among the prisoners, is pulmonary tuberculosis. This is undoubtedly contributed to by the close and indifferent housing of the prisoners. In some camps the morbidity from this disease

MENU OF THE WAR PRISONERS' KITCHEN, OFFICERS' SECTION, AT GUTERSLOH, NOVEMBER 21 TO 27, 1915
(Translated from the original.)

Date	Breakfast	Dinner	Supper
Sunday, 21	Coffee, 20g. Coffee substitute (Zusatz), 10g. Milk, 60g. Bread, 100g. Marmalade, 50g.	Roast of veal, 125g. Potatoes, 750g. Compote, 100g. Bread, 100g. Lard and flour each, 20g.	Holland cheese, 90g. Tea, 5g. Sugar, 25g. Bread, 100g.
Monday, 22	id.	Barley (soup) 150g. Potatoes, 750g. Beef (boiled), 125g. Bread, 100g. Lard and flour each, 20g.	Oat-flake porridge with prunes, 500g. Tea, 5g. Sugar, 25g. Bread, 100g.
Tuesday, 23	id.	Carrots, 150g. Potatoes, 750g. Pork (roast), 110g. Bread, 100g. Lard and flour each, 20g.	Liver sausage, 90g. Tea, 5g. Sugar 25g. Bread, 100g.
Wednesday, 24	id.	Swedish turnips, 150g. Potatoes, 750g. Veal (roast), 125g. Bread, 100g. Lard and flour each, 20g.	Porridge with milk, 500g. Tea, 5g. Sugar, 25g. Bread, 100g.
Thursday, 25	id.	Cabbage, 150g. Potatoes, 750g. Mutton, 125g. Bread, 100g. Lard and flour each, 20g.	Salt herring with boiled potatoes in jackets, 500g. Tea, 5g. Sugar, 25g. Bread, 100g.
Friday, 26	id.	? meat, 125g. Potatoes, 750g. Mustard gravy, 100g. Bread, 100g. Mustard, 10g. Lard and flour each, 20g.	Liver sausage, 90g. Tea, 5g. Sugar, 25g. Bread, 100g.
Saturday, 27	id.	Red Cabbage, 150g. Potatoes, 750g. Bologna sausage, 125g. Bread, 100g. Lard and flour each, 20g.	Pea soup with boiled pig's ears, 500g Tea, 5g Sugar, 25g Bread, 100g

reaches two and a half to three per cent., and the hospital mortality from this disease reaches eighty per cent. In fact more deaths among prisoners are due to tuberculosis than from all other causes combined. Next in order of their occurrence are the diarrheal and intestinal diseases, usually not serious in character. Typhus exanthematicus made its appearance in two or three of the camps, causing frightful morbidity and mortality in one. This regretable occurrence was due to the inhumanity of the prison commandant, who, when typhus broke out in the barracks among the Russian prisoners, insisted upon the English, French and other prisoners occupying the same barracks with the infected Russians, until some eight hundred of the prisoners became infected with the disease and about three hundred of them died. This epidemic, when the commandant was shorn of a part of his authority and effective measures were established within the camp, was soon controlled, and for the past four months no cases of epidemic diseases were encountered in the prison camps in Germany. Cholera is occasionally imported into the camps from the Russian frontier. These cases are quickly diagnosed, segregated, and the disease prevented from becoming epidemic. Contrary to the general idea, there are few cases of insanity or mental disturbance encountered among the prisoners of war. In one of the larger camps, containing 48,000 prisoners on its rolls and established for the past ten months, only three cases of insanity have developed.

Great care of person and clothing is insisted upon by the prison authorities. The authorities in Germany place greater importance upon their laundry and bath-room facilities than they do upon any other institution of their camp regime except their kitchens. To the laundry and bath-house each pris-

oner must go, with his surplus clothing and loose bedding, at least once a week. There he takes his bath, washes his clothes, and has his clothing and bedding disinfected in the steam-chamber or in the autoclave. The prisoners are frequently mustered for inspection by the authorities of the camp. Their barracks are inspected regularly, and immediately that one is found to be infested with vermin of any kind, it is abandoned, the bedding burned, the barracks scrubbed and fumigated, the bed-clothing washed and disinfected, and the prisoners isolated in clean barracks until they are free from vermin and are ready to go into clean permanent barracks. Among the thousands of prisoners examined in different camps, and as many beds and beddings inspected, not a single louse or bed-bug was discovered.

The administration of the prison camps was found, with but the one single exception noted above, humane, just and of high order. For the commandant of these camps some retired officer high in rank, usually a Major-General, is detailed. He has a full staff with him—his Adjutant, his Quartermaster and his Commissary. His medical staff is large or small in proportion to the number of prisoners confined. He has supreme command of the prisoners and prison camp, as well as the command which is detailed to the camp to guard the prisoners. In every instance but one, in the experience of our Commission, the commandant of the prison camp was a man well along in years, kindly, generous spirited, and experienced in the conduct of the work with which he was intrusted. As an example, the commandant of the prison camp at Munster, Germany, presents himself. Major-General von Eyd-Steinecker was the commandant. He had the interest of the 50,000 prisoners under his care at heart. He established within his camp a theatre which accommodated 650 people, in which comedies and dramas were staged, the parts being taken by the prisoners themselves. He organized schools for the instruction of such prisoners as might desire to take advantage of them, the teachers being selected from among the prisoners of the camp. He maintained a large studio in which were working painters and sculptors of the different nationalities in camp. A large playground was connected with the camp, where football, baseball, running, jumping, boxing, and other sports could be indulged in. Without the camp he established a large farm where vegetables, beans and other articles of food were raised for the consumption of the camp. In this prison camp was a bank which had deposits aggregating 150,000 marks and which employed 125 clerks, where the funds sent to the prisoners from home, or earned by them at labor in the fields or mines or factories, could be deposited and later utilized as they saw fit. Each compound in the camp had its own band, and there were three orchestras in the camp at large. The hospital connected with this prison camp was especially well cared for and well equipped. He had instructed his medical staff to examine frequently and regularly the prisoners for signs of tuberculosis, and upon such a diagnosis being made the prisoner was sent to a segregation camp provided for the reception of this class of sick. He had equipped in his camp a large tailoring establishment for the repair and manufacture of clothing, and a large boot and shoe shop, which employed 150 workmen, for the repair of footwear. In another place he had established a factory for wooden shoes, where great quantities of this class of foot-wear were turned out. He enjoyed the respect of all the prisoners in this camp, and without exception the prisoners praised the General and his administration and the care and consideration which he gave them.

Each camp has its own canteen, where articles of food and clothing and toilet necessities can be purchased by the prisoners at a very low price, the latter being regulated by the German War Office. Each camp has its own post-office, where the mail, letters and packages addressed to the prisoners are delivered, censored, and then turned over to the prisoners. Each package received is opened in the presence of the prisoner himself, and if nothing objec-

tionable is found is at once delivered to him. The staff of this post-office, with the exception of the censors, is made up from among the prisoners themselves.

The officer prisoners of war are in every case treated with the consideration due their rank. Especial camps have been set aside for them; one of which, at Gutersloh, has every comfort which they could reasonably expect. It was built and designed for a sanatorium and was just completed at the outbreak of hostilities. It consists of twelve large modern stone buildings, three stories in height, and accommodates with ease and comfort the twelve hundred officers who are detained here. Each officer has quarters in keeping with his rank, and each officer of sufficient rank has detached for his service an orderly of his own countrymen. The bedding is good, the kitchen is excellent, and the food is both sufficient in quantity and variety to insure a well-balanced diet. Although on two days in the week in Germany the use of meat is forbidden, yet on these days in the prison camp for officers at Gutersloh, meat was served at their meals. The officers, too, are permitted to receive delicacies and food from home. Attached to the camp are large fields for foot-ball, tennis and other sports. Libraries have been instituted for each nationality. In fact, the whole has more the appearance of a large, overcrowded, rather badly managed club than it does of a prison camp. The commandant is very kind in his treatment of these prisoners, is very considerate of their condition, and is extremely popular with all classes of officers under his rule.

The Governments engaged in the present war have in excess of five millions of prisoners of war. The task of housing, feeding, and preserving the health of this large number is gigantic, and the different Governments are accomplishing this work with commendable success. Only in the instance of one of the larger countries is anything like serious complaint made. In this case lack of medical officers, organization, and difficulties of transportation contribute to conditions among the prison camps that are deplorable. In all other Governments the best possible is being done in caring for these prisoners of war, and their lot is made bearable by an administration that is kind, humane and just.

WATER SUPPLY ON THE MARCH*

By COL. C. H. MELLVILLE, M.B., D.P.H., R.A.M.C.

Late Professor of Hygiene, at the Royal Army Medical College, London.

BEFORE actually discussing the subject of my paper, I propose to state certain postulates, which are matter of common knowledge to those who have studied the physiology of the march, but in my experience not so familiar to the general profession.

(1) The exercise of marching, as indeed all general muscular exercise, produces an elevation of the body temperature of from 2 to 3 degrees F., that is between 100.4 and 101.4 degrees F.

(2) That this rise is physiological, beneficial, and in fact necessary, to the efficient performance of muscular work, a fact enshrined in the well-known phrase "getting warmed to one's work."

(3) That this elevated temperature (being the optimum, or normal, for the condition of active exercise, just as what is more usually named the "normal" temperature (viz., 98.4 degrees F.) is the normal and optimum for rest), is kept at a constant level by the three means of heat loss, viz., radiation, convection and evaporation.

(4) That since heat can be lost by convection and radiation only when the heated body is in contact with, or in close proximity to, other bodies at a lower

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temperature, or immersed in a relatively cold medium, the marching soldier is practically dependent on evaporation as a means of getting rid of superfluous heat, that is, of regulating his body temperature under ordinary conditions.

(5) That the body contains a considerable quantity of water, and is not able to lose more than a certain amount of fluid without loss of efficiency.

(6) That therefore the regulation of the body temperature by means of evaporation necessitates a replacement of the water lost by ingestion of more water.

The question of water supply on the march therefore resolves itself into two parts:

(1) How much water can the body afford to lose?

(2) When and how often must this water be replaced?

It is to be noted that we are dealing here entirely with the question of quantity. That of quality stands on a totally different footing. Quality is concerned with the causation of disease, the introduction of specific disease micro-organisms, a matter of occasional and comparatively rare occurrence. Quantity is a physiological question, concerned with the maintenance of efficiency, one, in other words, which is persistent from minute to minute. Quantity, therefore, comes immeasurably first, a fact frequently ignored.

How much water can the body afford to lose? A man weighing 150 lb. contains in his tissues 100 lb. of water. He certainly cannot afford to lose more than one-tenth of this, that is 10 lb. = 1 gallon, without running serious risk of death. If he is in good condition, well trained to marching, he can perhaps at the outside afford to lose 7.5 lb. (6 pints) without loss of efficiency or intolerable suffering, if in bad training a loss of 2.5 lb. (2 pints) will probably produce the former, and certainly the latter, unless he possess exceptional powers of self-denial. I will term these quantities, arbitrarily fixed I admit, but fairly close to the truth, the upper and lower limits of permissible loss. The point to be remembered is that, whether the limit of permissible loss be high or low, once it is reached the lost water must be steadily replaced, whatever the man's condition. In either case he has to maintain a certain head of water, so to speak, always available, and this can only be done by giving him, once his limit has been reached, just as much water as he continues to lose as the result of further evaporation, that is, exertion.

The next point to ascertain is how much water does he actually lose in a given time, or after covering a certain distance. The actual exertion demanded by a march of one mile, over a give-and-take road, such as we meet with on Salisbury Plain, or the southeast of England generally, is 90 gramme calories, in the case of a soldier in heavy marching order. If the heat thus produced is to be dissipated by evaporation, then for every mile 180 c.c. of water must be got rid of. In one hour's march, say three miles, allowing for a ten minutes' halt in the hour, he will have lost 540 c.c., or almost 1 pint (570 c.c.). For the first mile, however, the heat produced will be utilized in raising his body temperature to the optimum for exercise, and heat regulation will not therefore come into play till this distance has been covered. At the end of the first four miles he will have lost 1 pint, at the end of seven miles nearly 2 pints; the amount fixed on is the lower limit of permissible loss. In the case of the untrained man, then, it is easily seen that he should be able to march seven miles, in other words, half an ordinary day's march, without drinking. At the half-way halt he must have his first drink, and after that regularly hour by hour 1 pint of water, or a little less, for every hour of the march. His water-bottle contains exactly 1¾ pints, so that we see that this man should be able to march seven miles without touching his bottle, that he should have a little less than a pint at the half-way halt, and the rest at the end of 10 miles, after which he should be able to get home (14 miles, say) without any further supply. Supposing him, however, to be in the best possible condition, and able

to endure the upper limit of permissible loss, namely, 6 pints, it is obvious that he can afford to lose 6 pints, that is, to cover six times three miles, in addition to the preliminary one mile, without drinking, a total of 19 miles. This is the limit of endurance and probably few men can attain to it. It is safe to say, however, that every soldier should be in a condition to cover an ordinary day's march of 14 miles without having recourse to his water-bottle, on condition that the road is a fair give-and-take one. If the road be a hilly one entailing great expenditure of energy, then all the times will be shortened, and the best man may need to have recourse to his bottle before the end. If the march be continued beyond ordinary limits to, say, 25 miles, then every man must have his pint or thereabouts every hour after his limit of endurance is reached, whatever that original permissible limit of loss may have been. It is on a recognition of this fact that the efficient performance of forced marches depends. It is often said, by people who object to drinking on the march, that the great objection lies in the fact that once you begin to drink you must go on. This is perfectly true, and in fact follows from what I have already said. The first drink fixes the limit of permissible loss. The mere fact that the man takes the drink shows that either his limit of endurance of thirst has been reached, or that in his then condition of training his body is unable to work efficiently with a lower head of water than has been produced. This is equally true whether he be a resolute, well-trained man, or one of weak self-control and in bad condition. He can raise his limit of permissible loss, in other words, he can postpone his first drink, but more than this he cannot do. At whatever level he can, or is forced, to fix his limit of permissible loss at that level he must maintain the water in his body.

Another objection that is frequently made, especially by regimental officers, to the rule that men should be regularly watered on the march, is that they have always managed to do without water for themselves, and they will probably relate long marches made by them on shooting trips in the Himalayas or elsewhere, on which they never drank anything, and were none the worse for it. When these cases are analysed it will be found that there are several fallacies underlying them. In the first place, the officer on the march is outside the ranks. He gets the full benefit of any breeze that may be blowing, and he is not hampered by the jostling of other men close to him. Lastly, and most important of all, he carries only half the load, if even as much as that, that the private soldier has to march under. The latter carries a dead weight greater than one-third of his own weight; therefore, of the 90 calories that he expends per mile about 25 are due to dead weight. I do not propose to go into the question of the effect of weight carried, but as most men who have gone on walking tours know, every additional pound over 30 lb. makes a disproportionate demand on one's efforts. The officer carries less than half the man's load, and therefore we should deduct at least 15 out of the 25 calories due to dead weight to equalize the energy demands of the two individuals. The officer, then, expends at the outside probably 75 calories. Even if he depend entirely on evaporation to regulate his temperature he loses nearly 100 c.c. per hour less water than the soldier. Again, he is usually in much better condition. I refer to our own army. His limit of permissible loss is, therefore, higher, on purely physiological grounds, than that of the soldier, and being more highly educated he should be able to maintain it even at a higher level by means of self-control. Place it at the mean of the upper and lower limits, say at 4 pints, and see the result. Allowing again the first mile to raise the temperature, we find that it will take four hours to get rid of these 4 pints of water, that is, a march of 12 miles. It would be a poor-spirited man indeed who could not hold out for another two if he had to, if only for the sake of example. An officer should, therefore, be able to do an ordinary march of 14 miles without drinking.

As to the other stories, I refuse to accept them as evidence in this discussion. The circumstances are usually quite incomparable. In the first place, the narrator is in many cases speaking of a climate in which he was not forced to rely entirely on evaporation for temperature regulation. So many of these occurrences have Cashmere or the Indian Hills for their *mise en scene* that I feel quite justified in saying this. Again, he carried no weight at all, and if the weather was at all warm probably stripped to his shirt sleeves and a pair of shorts. A man walking in such a state of freedom cannot lay down rules for men carrying 50 lb. dead weight in the middle of a dense column of troops, choked by dust, and hampered by unduly thick clothes, and the restraint of the belts and braces of their equipment.

In conclusion, then, I venture to lay down the following rules:

(1) A soldier on the march, even if untrained, should be able to cover the first half of the march, that is, seven miles, without a drink.

(2) That at the half-way halt of an ordinary march he should be allowed to drink half the contents of his water-bottle and the remainder at the next hourly halt.

(3) That as his condition improves he may be further restricted, if there is any reason for it, so that the contents of his water-battle may last him over a march, say of twenty or twenty-two miles. Remember that there is not much to be gained by restricting water, if water is to be got, except as a method of training in self-control.

(4) Water is never to be drunk by any man except at the word of command. This is most important. It was the rule maintained in the finest body of fighting men the British Army ever contained, the Light Division in the Peninsula. Some of the modern representatives of the regiments that formed that division still observe the rule, which should be a universal one.

(5) If a march is over fourteen miles with raw troops, or over twenty with any, the staff should make careful plans for the watering of the men at the rate of 1 pint per man per hour, or per three miles, for so long as the march lasts. Neglect of this important rule may lead to serious disaster. In the German Army Field Service Orders it is laid down that on hot or long marches, mounted or cycle orderlies shall be sent ahead to warn the villagers to turn out and line the streets with tubs and buckets of water so that the men may get some as they pass through.

A similar injunction was at one time included in our "Combined Training" but has disappeared from the Field Service Regulations. Medical officers with marching columns should, however, remember the possibility of such a precaution being necessary, especially in a dry summer when there are but few wayside streams, and in chalk and limestone countries. The penalty for neglect of precautions in this important matter is heat-stroke, and quite possibly death, resulting from inability to regulate the temperature in the absence of free perspiration.

I have insisted in this paper on the necessity of replacing the water-loss regularly hour by hour. This is important. It might be thought that a double allowance at long intervals would do as well as a smaller one at shorter intervals. This is not the case. Water after ingestion is only slowly taken up by the tissues, and if there is any excess it merely passes through the kidneys, without doing the body much permanent good. Water supply, then, must be regular and sufficient. It must never be left to chance, any more than the supply of ammunition may be left to chance. So, too, the expenditure of water in drinking must be regulated as carefully as that of ammunition in action. No man should be allowed to use his water-bottle without orders, any more than he is allowed to fire a round of ammunition without orders.

The Sanitary Inspectors' Association of Western Canada

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PASTEURIZATION OF MILK

Read before the Winnipeg Members by A. F. CUMMINGS, B.Sc., N.D.D., Creameries Inspector, Winnipeg Health Inspector.

THE term "pasteurize" is derived from the name of the famous French chemist, Louis Pasteur, who, in 1860, found that by heating the juice of the grape to 160° F., afterwards cooling to fermenting temperature and introducing the desired ferment, he could control the flavor of the wines. It is not known that he did anything with reference to the dairy industry, but is said to have remarked that here was a rich field for investigation. To Professor Jensen of Copenhagen belongs the credit of having introduced the system of pasteurization as applied to butter making, while Soxhlet carried out the first experiments in connection with the heating of milk.

Theoretically pasteurization should not be necessary, but in practice it is essential to enforce the pasteurization of a large portion of the milk supply of every city. When we take into consideration the fact that comparatively few of our dairy cattle are tuberculin tested, that milk in Winnipeg is shipped from a radius of 100 miles, and that the facilities for keeping it cool in transit are not of the best, pasteurization becomes not only advisable but an indispensable adjunct in the commercial handling of large quantities of milk.

Objects.

The objects, then, of pasteurization are to increase the keeping quality, to prevent the distribution of pathogenic organisms, and in handling mixed milk to put a uniform supply on the market. All these requirements should be carried out with the minimum amount of physical and chemical change in the milk.

It was held at one time that pasteurization caused considerable chemical change in milk, rendering it less digestible. Recent scientific research, however, along this line proves conclusively that this theory is erroneous, and that the objects of pasteurization may be accomplished by the "holding" process at a comparatively low temperature, which does not cause any appreciable chemical change in the milk.

Bacteriological and Chemical Changes.

The amount of bacteriological and chemical change produced in milk by heat is in direct proportion to the temperature employed and the length of time during which the milk is subjected to the heating process. According to recent experiments carried on in the Hygienic Laboratory in Washington it has been demonstrated beyond doubt that the tubercle bacillus as well as the specific micro-organisms causing typhoid, diphtheria, dysentry, cholera, etc., are rendered harmless at a temperature of 140° F. maintained for 20 minutes. On account of the prevalence of tuberculosis amongst dairy cattle and the frequent occurrence of the tubercle bacillus in milk, its thermal death point should be adopted as a standard in pasteurization. Having this in view, the New York Milk Commission passed a resolution regarding the temperature of pasteurization

as follows: That the pasteurization of milk should be between the limits of 140° and 155° F. At 140° the minimum exposure is 20 minutes, and for every degree above 140° the time may be reduced one minute. In no case should the exposure be for less than five minutes.

Little is known of the toxic products of bacterial growth and we are acquainted with very few, but according to Dr. Rosenau, the toxins produced by typhoid and diphtheria are non-resistant to heat, and are rendered inert at a temperature of 140° F. In this connection it is interesting to note that the toxin of Bacillus Coli Communis, always found in dirty milk, is unaffected by a temperature of 274° for 15 minutes. There is no doubt that the spore-bearing organisms can set up putrefactive and proteolytic changes in milk and produce poisons as the result, but their connection with milk poisoning has been inferred, not demonstrated. Moreover, if pasteurized milk is used within 24 hours the spore-bearing bacteria which may be present will not have time to set up any appreciable bacterial activity.

It has been demonstrated by Ayres and other investigators that efficient pasteurization destroys 99 per cent. of the acid-forming bacteria. Pasteurized milk turns sour, therefore, in the majority of cases, in the same manner as raw milk, although the process is somewhat delayed. This may be said to be fortunate as it compels the consumer to take the same care of it as with raw milk, whereas if pasteurized milk did not go sour, it would lead some people to imagine that it would keep indefinitely, and the results would be serious.

Enzymes.

Enzymes are organized ferments, i.e., they have no definite organized structure like bacteria. They are soluble in water, from which they can be precipitated by alcohol. As milk is of itself, to a limited extent, capable of acting as a digestive fluid by virtue of the enzymes which it contains, it is not advisable to employ such temperatures in pasteurization as would destroy these enzymes. Some of them, such as lactose, the fat-splitting and the proteolytic enzyme which bring about the change of lactose sugar to glucose, split the fats up into their component parts, the acid and the alcohol, and form peptones from the fibre in milk, are resistent to a temperature of 140° to 150° for a considerable period, but are destroyed by a short exposure between 150° and 160° F.

Chemical Changes.

The soluble phosphates of lime and magnesia do not become insoluble in milk subjected to efficient pasteurization. At a temperature of as high as 155° F. the quantity of phosphoric acid, lime and magnesia in the scum of both raw and pasteurized milk is the same.

The albumin does not coagulate at 145°, while at 150° 5.75 per cent. of the albumin is rendered soluble.

The acidity as determined by titration is slightly diminished in pasteurized milk.

The lactose sugar does not caramalize in pasteurized milk.

The cream line is not affected till a temperature of 145° for 30 minutes is exceeded.

On reviewing the foregoing results, it will be seen that the best pasteurizing temperature is 145° for 25 to 30 minutes.

Methods of Pasteurization.

Flash, holding, and pasteurization in the bottle.

The flash system endeavors to do in one to two minutes what the holding system takes 20 to 30 minutes to do. On account of the shortened time of heating a temperature of 160° to 180° has to be used in the flash process, which should be discouraged as such high temperatures cause considerable chemical change in the milk, making it less digestible.

In the holding process a temperature of 145° is used and the milk held for 20 to 30 minutes. There is then no change in the physical and chemical properties of the milk, the pathogenic organisms are destroyed, and 99 per cent. of the non-sporing bacteria.

There is, however, one disadvantage of the holding system which applies equally to the flash system, and that is the chance of re-contamination of the milk after the process is completed in its pasage through pumps, pipes, mixing vats and bottling and capping machines. Injurious organisms gaining access to the milk at this particular stage when the bacterial count is low have a free field for growth and

should the temperature prove favorable, they multiply very rapidly. This very often happens after the milk leaves the pasteurizing plant and gets into the hands of a consumer who does not realize the importance of keeping the daily milk supply cool. The only way to avoid the difficulty of recontamination is to pasteurize in the bottle. A few years back pasteurization in the bottle was not thought feasible, but it has since been found to be practicable and as economical as any other method, while the process is far more efficient. Dr. Hall of the Health Department of Minneapolis has demonstrated the advantages of pasteurization in the bottle by a few experiments in bacterial counts.

Raw milk, as it left the clarifier, plated at once, had a bacterial count of 2,000,000 per c. c. Same milk, pasteurized by the holding process, held for 30 minutes at 145°, plated one hour after pasteurization, had a bacterial count of 25,000 per c. c.

Same milk, pasteurized in bottle, held fifteen minutes at 145°, plated one hour after pasteurization, had a bacterial count of 500 per c. c. Same milk, pasteurized by holding method, held 30 minutes at 145°, plated 24 hours after pasteurization, had a bacterial count of 1,000,000 per c. c.

Same milk pasteurized in bottle, held 15 minutes at 145°, plated 24 hours after pasteurization, had a bacterial count of 1,000 per c. c.

The above figures clearly indicate the advantages of pasteurization in the bottle over pasteurization by any other method.

In conclusion, the importance of having a clean, fresh supply of milk for pasteurization should be emphasized. All the farms producing milk should, of course, be up to a certain standard of construction and equipment. Unsuitable material should be discarded, while all milk should arrive at the pasteurizing depot at a temperature of not more than 60° F. and should have an acidity of not more than 2-10 of 1 per cent. This work is materially assisted by sediment testing, which indicates by the sediment in one pint of milk whether or not it is fit for pasteurization. If this is done, the Public Health is safeguarded and the consumer is ensured a good, wholesome supply of pasteurized milk.

NOTES AND JOTTINGS

Mr. P. B. Tustin, a member of our Executive Council, and who is also Hon. Secretary to the Examining Board for Manitoba of the Royal Sanitary Institute, is at present in the West conducting examinations for sanitary inspectors. An examination was held at Regina on February 18th, at which seven candidates presented themselves, including several of our associate members.

Mr. Tustin is going through to the Coast and will present the claims of the association to the sanitary inspectors there, whom we have found it rather difficult to get in touch with owing to distance.

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The Executive admitted two new members this month.

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Mr. E. Saville, a member of the Winnipeg staff, has enlisted in the 183rd Battalion, C. E. F. * * *

If there are any other members enlisted for active service whose names have been overlooked, the Secretary would like to be informed of same in order that our Roll of Honor may be complete.

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Major W. F. Thornley, Vice-President for Manitoba, is a very busy man these days. Not being able to go to the front himself (he has three sons there, however, all of whom have been wounded), Major Thornley is doing splendid work in Winnipeg in encouraging enlistment and organizing and drilling the Winnipeg Reserve Battalion.

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We get cheery and encouraging letters at intervals from Mr. Thomas Watson, Vice-President for Saskatchewan, Mr. H. D. Mathias, Secretary of the Regina Branch, and others. Mr. Officer is always glad to hear from any of the members.

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We wonder if the Regina City Council have yet got wise to the fact that they cannot easily find better men for sanitary work than the members of their present staff. Nor can they expect properly qualified men to work for less than a fair salary. * * *

Regina aldermen and controllers must develop cold feet very easily.